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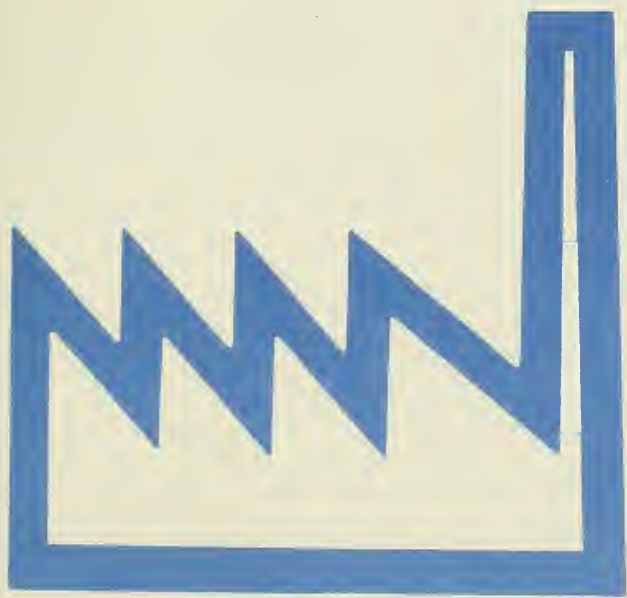
Census of Manufactures

MC87-I-37A

INDUSTRY SERIES

Motor Vehicles and Equipment

Industries 3711, 3713, 3714, 3715, and
3716



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Many persons participated in the various activities of the 1987 Census of Manufactures.

The overall planning and review of the census operations were performed by the staff of the Office of the Assistant Director for Economic and Agriculture Censuses.

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If you have any questions concerning the statistics in this report, call (301) 763-7304.

1987

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INTRODUCTION

PURPOSE AND USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source of facts about the structure and functioning of the Nation's economy. They provide essential information for government, business, industry, and the general public.

Economic censuses furnish an important part of the framework for such composite measures as the gross national product, input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.

Policy-making agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.

State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.

Trade associations study trends in their own and competing industries, and keep their members informed of market changes.

Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic censuses every 5 years, covering years ending in 2 and 7. The 1987 Economic Censuses consist of the

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1987 Census of Agriculture and 1987 Census of Governments are conducted separately.) The next economic censuses are scheduled to be taken in 1993 covering the year 1992.

AVAILABILITY OF THE DATA

The results of each of the economic censuses are available in printed reports, for sale by the U.S. Government Printing Office, and on microfiche, computer tape, compact discs with read-only memory, and flexible diskettes, for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Census Bureau, Washington, DC 20233. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State Data Centers in every State and Business and Industry Data Centers in many States also supply economic census statistics.

WHAT'S NEW IN 1987

Several changes have taken place for the 1987 censuses. Data will be reported on the basis of the newly revised Standard Industrial Classification (SIC) system with selected reports including "bridge tables," linking the old and new classification systems. A new set of metropolitan areas has been adopted, and more detailed information will be available for businesses with no paid employees. For additional information on these changes, review the subsequent text.

HISTORICAL INFORMATION

The economic censuses have been taken together as an integrated program at 5-year intervals since 1967, and before that for 1963, 1958, and 1954. Prior to that time, the individual censuses were taken separately at varying intervals.

The economic censuses trace their beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial

activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 manufactures census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade, and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 economic censuses were the first to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. These were the first censuses to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records have also been used to provide basic statistics as well for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic censuses, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The Census of Construction Industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The Census of Transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks. New for 1987 are publications reporting on business establishments engaged in several transportation industries, paralleling the data on establishments in other sectors. This is part of a gradual expansion in coverage of industries previously subjected to government regulation. The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic censuses in 1972 along with the Survey of Women-Owned Businesses.

Economic censuses have also been taken in Puerto Rico since 1909, in the Virgin Islands and Guam since 1958, and in the Northern Mariana Islands since 1982.

Statistical reports from the 1982 and earlier censuses provide historical figures for the study of long-term time series, and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the censuses provide complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, the results of which appear in publication series such as *Current Business Reports* (retail and wholesale trade and service industries), the *Annual Survey of Manufactures*, *Current Industrial Reports*, and the *Quarterly Financial Report*. Most of these surveys, while providing more frequent

observations, yield less kind-of-business and geographic detail than the censuses. The *County Business Patterns* program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1987 Economic Censuses and Related Statistics*. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1987 Economic Censuses*. Contact Customer Services for information on availability.

CENSUS OF MANUFACTURES

General

This report, from the 1987 Census of Manufactures, is one of a series of 83 industry reports, each of which provides statistics for individual industries or groups of related industries. Additional separate reports will be issued for each State and the District of Columbia and for special subjects such as type of organization, distribution of sales by class of customer, concentration ratios and water use in manufacturing.

The industry reports include such statistics as number of establishments, employment, payroll, value added by manufacture, cost of materials consumed, capital expenditures, product shipments, etc.

State reports present similar statistics for each State and its important metropolitan statistical areas (MSA's), counties, and places. Selected statistical totals for "all manufacturing" have been shown in the State reports for MSA's with 250 employees or more and for counties and places with 450 employees or more.

The *General Summary* report will contain industry, product class, and geographic area statistics summarized in one report. The introduction to the *General Summary* discusses, at greater length, many of the subjects described in this introduction. For example, the *General Summary* text will discuss the relationship of value added by manufacture to National income by industry of origin, the changes in statistical concepts over the history of the censuses, and the valuation problems arising from intracompany transfers between manufacturing plants of a company and between manufacturing plants and sales offices and sales branches of a company.

Scope of Census and Definition of Manufacturing

The 1987 Census of Manufactures covers all establishments with one paid employee or more primarily engaged in manufacturing as defined in the *1987 Standard Industrial*

*Classification (SIC) Manual*¹. This is the system of industrial classification developed by experts on classification in Government and private industry under the guidance of the Office of Information and Regulatory Affairs, Office of Management and Budget. This classification system is used by Government agencies as well as many organizations outside the Government.

The SIC Manual defines manufacturing as the mechanical or chemical transformation of substances or materials into new products. The assembly of component parts of products also is considered to be manufacturing if the resulting product is neither a structure nor other fixed improvement. These activities are usually carried on in plants, factories, or mills that characteristically use power-driven machines and materials-handling equipment.

Manufacturing production is usually carried on for the wholesale market, for transfers to other plants of the same company, or to the order of industrial users rather than for direct sale to the household consumer. Some manufacturers in a few industries sell chiefly at retail to household consumers through the mail, through house-to-house routes, or through salespersons. Some activities of a service nature (enameling, engraving, etc.) are included in manufacturing when they are performed primarily for trade. They are considered nonmanufacturing when they are performed primarily to the order of the household consumer.

Relationship Between Annual Survey of Manufactures and Census of Manufactures

The Bureau of the Census conducts the annual survey of manufactures (ASM) in each of the 4 years between the censuses of manufactures. The ASM is a probability-based sample of approximately 56,000 establishments and collects the same industry statistics (employment, payroll, value of shipments, etc.) as the census of manufactures. In addition to collecting the information normally requested on the census form, the establishments in the ASM sample are requested to supply information on assets, capital expenditures, retirements, depreciation, rental payments, supplemental labor costs, costs of purchased services, and foreign content of materials consumed. Except for supplemental labor costs, the extra ASM items are collected only in census years.

Establishment Basis of Reporting

The census of manufactures is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each location. The ASM also is conducted on an establishment basis, but separate reports are filed for just those establishments selected in the sample. Companies engaged in

distinctly different lines of activity at one location are requested to submit separate reports if the plant records permit such a separation and if the activities are substantial in size.

In 1987, as in earlier years, a minimum size limit was set for inclusion of establishments in the census. All establishments employing one person or more at any time during the census year are included. The same size limitation has applied since 1947 in censuses and annual surveys of manufactures. In the 1939 and earlier censuses, establishments with less than \$5,000 value of products were excluded. The change in the minimum size limit in 1947 does not appreciably affect the historical comparability of the census figures except for data on number of establishments for a few industries. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units that service manufacturing establishments of the same company (see Auxiliaries).

Manufacturing Universe and Census Report Forms

The 1987 Census of Manufactures universe includes approximately 350,000 establishments. The amounts of information requested from manufacturing establishments were dependent upon a number of factors. The more important considerations were the size of the company and whether it was included in the annual survey of manufactures. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small Single-Establishment Companies Not Sent a Report Form

In the 1987 Census of Manufactures, approximately 150,000 small single-establishment companies were excused from filing reports. Selection of these small establishments was done on an industry-by-industry basis and was based on annual payroll and total shipments data as well as on the industry classification codes contained in the administrative records of Federal agencies. The cutoffs were selected so that these administrative-records cases would account for no more than 3 percent of the value of shipments for all manufacturing. Generally, all single-establishment companies with less than five employees were excused, while all establishments with more than 20 employees were mailed forms.

Information on the physical location of the establishment, as well as information on payrolls, receipts (shipments), and industry classification, was obtained from the administrative records of other Federal agencies under special arrangements, which safeguarded their confidentiality. Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and cost of materials

¹Standard Industrial Classification Manual: 1987: For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, Stock No. 041-001-00314-2.

were not distributed among specific products and materials for these establishments but were included in the product and material "not specified by kind" (n.s.k.) categories.

The industry classification codes included in the administrative-records files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded at the four-digit SIC level. This was especially true whenever there was a relatively fine line of demarcation between industries or between manufacturing and nonmanufacturing activity.

Sometimes these administrative-record cases were only given a two- or three-digit SIC group. For the 1987 Census of Manufactures, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the four-digit SIC level. Establishments that did not return the classification form were coded later to those four-digit SIC industries identified as "not elsewhere classified" (n.e.c.) within the given two- or three-digit industry groups.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments Sent a Report Form

The 200,000 establishments covered in the mail canvass were divided into three groups:

- a. **ASM sample establishments**—This group consisted of approximately 56,000 establishments covering all the units of large manufacturing establishments as well as a sample of the medium and smaller establishments. The probability of selection was proportionate to size (see appendix, Annual Survey of Manufactures).

In a census of manufactures year, the ASM report form (MA-1000) replaces the first page of the regular census form for those establishments included in the ASM. In addition to information on employment, payroll, and other items normally requested on the regular census form, establishments in the ASM sample were requested to supply information on assets, capital expenditures, retirements, depreciation, rental payments, supplemental labor costs, and costs of purchased services. See appendix A, section 2, for an explanation of these items.

The census part of the report form is one of approximately 200 versions containing product, material, and special inquiries. The diversity of manufacturing activities necessitated the use of these many forms to canvass the 459 manufacturing industries. Each form was developed for a group of related industries.

Appearing on each form was a list of products primary to the group of related industries as well as secondary products and miscellaneous services that establishments classified in these industries were likely to be performing. Respondents were requested to identify the products, the value of each product, and, in a large number of cases, the quantity of the product shipped during the survey year. Space also was provided for the respondent to describe products not specifically identified on the form.

The report form also contained a materials-consumed inquiry, which varied from form to form depending on the industries being canvassed. The respondents were asked to review a list of materials generally used in their production processes. From this list, each establishment was requested to identify those materials consumed during the survey year, the cost of each, and, in certain cases, the quantity consumed. Once again, space was provided for the respondent to describe significant material not identified on the form.

Finally, a wide variety of special inquiries was included to measure activities peculiar to a given industry, such as operations performed and equipment used.

- b. **Large and medium establishments (non-ASM)**—Approximately 84,000 establishments were included in this group. A variable cutoff, based on administrative-records payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive one of the approximately 200 census of manufactures regular forms. The first page, requesting establishment data for items such as employment and payroll, was standard but did not contain the detailed statistics included on the ASM form. The product, material, and special inquiry sections supplied were based on the historical industry classification of the establishment.
- c. **Small single-establishment companies (non-ASM)**—This group consisted of approximately 60,000 establishments. For those industries where application of the variable cutoff for administrative-records cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or "short" form was used. These establishments received one of the approximately 80 versions of the short form, which requested

summary product and material data and totals but no details on employment, payrolls, cost of materials, inventories, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics; the same data were collected on the short form as on the long form. However, detailed information on materials consumed was not collected on the short form; thus its use would increase the value of the n.s.k. categories.

Auxiliaries

In this industry report, the data on employment and payroll are limited to operating manufacturing establishments. The census report form filed for auxiliaries (ES-9200) requested a description of the activity of the establishments serviced. However, the manufacturing auxiliaries were coded only to the two-digit major group of the establishments they served; whereas, the operating establishments were coded to a four-digit manufacturing industry. Data for the approximately 10,000 separately operated auxiliaries are included in the geographic area series and in a report issued as part of the 1987 Enterprise Statistics Survey.

Auxiliaries are establishments whose employees are primarily engaged in performing supporting services for other establishments of the same company, rather than for the general public or for other business firms. They can be at different locations from the establishments served or at the same location as one of those establishments but not operating as an integral part thereof and serving two establishments or more. Where auxiliary operations are conducted at the same location as the manufacturing operation and operate as an integral part thereof, they usually are included in the report for the operating manufacturing establishment.

Included in the broad category of auxiliaries are administrative offices. Employees in administrative offices are concerned with the general management of multiestablishment companies, i.e., with the general supervision and control of two units or more, such as manufacturing plants, mines, sales branches, or stores. The functions of these employees may include (1) program planning, including sales research and coordination of purchasing, production, and distribution; (2) company purchasing, including general contracts and purchasing methods; (3) company financial policy and accounting; (4) general engineering, including design of product machinery and equipment, and direction of engineering effort conducted at the individual operation locations; (5) direction of company personnel matters; and (6) legal and patent matters.

Other types of auxiliaries serving the plants or central management of the company include purchasing offices, sales promotion offices, research and development organizations, etc.

Industry Classification of Establishments

Each of the establishments covered in the census was classified in 1 of 459 manufacturing industries in accordance with the industry definitions in the 1987 SIC Manual. The 1987 edition of this manual represents a major revision for manufacturing industries from the 1972 edition and its 1977 supplement. Appendix A of the 1987 Manual notes the revisions in the four-digit industry levels between 1972/77 and 1987.

An industry is generally defined as a group of establishments producing the same product or a closely related group of products. The product groupings from which industry classifications are derived are based on considerations such as similarity of manufacturing processes, types of materials used, types of customers, and the like. The resulting group of establishments must be significant in terms of number, value added by manufacture, value of shipments, and number of employees. The system operates in such a way that the definitions progressively become narrower with successive additions of numerical digits. For 1987, there are 20 major groups (two-digit SIC), 139 industry groups (three-digit SIC), and 459 industries (four-digit SIC). This represents an expansion of four-digit industries from 452 in 1972/77 and a reduction of three-digit groups from 143 in 1972/77. Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. There are about 11,000 products identified by a seven-digit code. The seven-digit products are considered the primary products of the industry with the same four digits.

Accordingly, an establishment is usually classified in a particular industry on the basis of its major activity during a particular year, i.e., production of the products primary to that industry exceeds, in value, production of the products primary to any other single industry. In a few instances, however, the industry classification of an establishment is not only determined by the products it makes but also by the process employed in operations. Refining of nonferrous metals from ore or rolling and drawing of nonferrous metals (processes which involve heavy capitalization in specialized equipment) would be classified according to the process used during a census year. These establishments then would be "frozen" in that industry during the following ASM years.

In either a census or ASM year, establishments included in the ASM sample with certainty weight, other than those involved with heavily capitalized activities described above, are reclassified by industry only if the change in the primary activity from the prior year is significant or the change has occurred for 2 successive years. This procedure prevents reclassification when there are minor shifts in product mix.

In ASM years, establishments included in the ASM sample with noncertainty weight are not shifted from one industry classification to another. They are retained in the industry where they were classified in the base census year (see appendix, Annual Survey of Manufactures).

However, in the following census year, these ASM plants are allowed to shift from one industry to another.

The result of these rules covering the switching of plants from one industry classification to another is that, at the aggregate level, some industries comprise different mixes of establishments between survey years, and establishment data for such industry statistics as employment and payroll may be tabulated in different industries between survey years. Hence, comparisons between prior-year and current-year published totals, particularly at the four-digit SIC level, should be viewed with caution. This is particularly true for the comparison between the data shown for a census year versus the data shown for the previous ASM year.

As previously noted, the small establishments that may have been misclassified by industry are usually administrative-record cases whose industry codes were assigned on the basis of incomplete descriptions of the general activity of the establishment. Such possible misclassifications have no significant effect on the statistics other than on the number of companies and establishments.

While some establishments produce only the primary products of the industry in which they are classified, all establishments of an industry rarely specialize to this extent. The industry statistics (employment, inventories, value added by manufacture, total value of shipments including resales and miscellaneous receipts, etc.) shown in tables 1a through 5a, therefore, reflect not only the primary activities of the establishments in that industry but also their secondary activities. The product statistics in table 6a represent the output of all establishments whether or not they are classified in the same industry as the product. For this reason, in relating the industry statistics, especially the value of shipments to the product statistics, the composition of the industry's output shown in table 5b should be considered.

The extent to which industry and product statistics may be matched with each other is measured by two ratios which are computed from the figures shown in table 5b. The first of these ratios, called the primary product specialization ratio, measures the proportion of product shipments (both primary and secondary) of the establishments classified in the industry represented by the primary products of those establishments. The second ratio, called the coverage ratio, is the proportion of primary products shipped by the establishments classified in the industry to total shipments of such products by all manufacturing establishments.

However, establishments making products falling into the same industry category may use a variety of processes and materials to produce them. Also, the same industry classification (based on end products) may include both establishments that are highly integrated and those that put only the finishing touches on an already highly fabricated item. For example, the refrigeration equipment industry includes instances of almost complete integration (production of the compressor, condensing unit, electric motor, casting, stamping of the case, and final assembly) all

carried on at one plant. On the other hand, the condensing unit, the motor, and the case may be purchased and only assembled into the finished product.

In some instances, separate industry categories have been established for integrated and nonintegrated establishments. For other industries, the census provides separate statistics on the production of intermediate commodities made and used in the producing plant. For some industries characterized by many plants of the same company, separate figures on interplant transfers of products usually are shown.

Differences in the integration of production processes, types of operations, and alternatives in types of materials used should be considered when relating the industry statistics (employment, payrolls, value added, etc.) to the product and material data.

Value of Shipments for the Industry Compared With Value of Product Shipments

This report shows value of shipments data for industries and products. In tables 1a through 5a, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in table 6a represents the total value of all products shipped that are classified as primary to an industry.

CENSUS DISCLOSURE RULES

In accordance with Federal law governing census reports, no data are published that would disclose the data for an individual establishment or company. However, the number of establishments classified in a specific industry is not considered a disclosure, so this information may be released even though other information is withheld.

The disclosure analysis for the industry statistics in tables 1a through 5a of this report is based on the total value of shipments. When the total value of shipments cannot be shown without disclosing information for individual companies, the complete line is suppressed. However, the suppressed data are included in higher-level totals. Additional disclosure analysis is performed for new capital expenditures that can be suppressed even though value of shipments data are publishable.

SPECIAL TABULATIONS

Special tabulations of data collected in the 1987 Census of Manufactures may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential

information (including name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief, Industry Division, Bureau of the Census, Washington, DC 20233.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.

n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

CONTACTS FOR DATA USERS

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Durables	Kenneth Hansen	(301) 763-7304
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Current Industrial Reports		
Durables	Malcolm Bernhardt	(301) 763-2518
Nondurables	Thomas Flood	(301) 763-5911
Import/Export Publications	Foreign Trade Division	(301) 763-5140
Industry Analysis and Forecasts	International Trade Administration	(202) 377-4356

Users' Guide for Locating Statistics in This Report by Table Number

For explanation of terms, see appendixes

Item	Four-digit industry statistics							Five-digit product class and seven-digit product statistics			
	Histori- cal	Operat- ing ratios	By geo- graphic area	Sum- mary and supple- mental	By employ- ment size	By industry and product class special- ization	Materials con- sumed by kind	Industry- product analysis	Product ship- ments	Product class by geo- graphic area	Historical product class
Number of companies	1a			3a					*6a		
Number of establishments....	1a		2	3a	4	5a					
Employment and payroll:.....											
Number of employees	1a	1b	2	3a	4	5a					
Payroll	1a	1b	2	3a	4	5a					
Supplemental labor costs ...				3a							
Production workers	1a	1b	2	3a	4	5a					
Production- worker hours....	1a	1b	2	3a	4	5a					
Production- worker wages...	1a	1b	2	3a	4	5a					
Shipments, cost of materials, and value added:											
Value of shipments (four-digit)	1a	1b	2	3a	4	5a		5b			
Product class shipments (five-digits)									6a	6b	6c
Product shipments (seven-digit)									6a		
Value added by manufacture	1a	1b	2	3a	4	5a					
Cost of materials	1a	1b	2	3a	4	5a					
Fuels and electric energy ...				3a							
Materials consumed by kind .							7				
Inventories:											
Total, end of year	1a			3a	4						
By stage of fabrication				3a							
Capital expenditures, assets, rental payments, and purchased services:											
New capital expenditures....	1a		2	3b	4	5a					
Used plant and equipment expenditures				3b							
Gross assets				3b							
Depreciation				3b							
Retirements of buildings and machinery				3b							
Rental payments				3b							
Foreign content of materials consumed				3c							
Purchased services				3c							
Ratios:											
Specialization	1a			3a				5b			
Coverage	1a			3a				5b			

*Number of companies with shipments of more than \$100 thousand.

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Motor Vehicles and Equipment

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DESCRIPTION OF INDUSTRIES AND SUMMARY OF FINDINGS

This report shows 1987 Census of Manufactures statistics for establishments classified in each of the following industries:

SIC code and title

3711	Motor Vehicles and Car Bodies
3713	Truck and Bus Bodies
3714	Motor Vehicle Parts and Accessories
3715	Truck Trailers
3716	Motor Homes

The industry statistics (employment, payroll, cost of materials, value of shipments, inventories, etc.) are reported for each establishment as a whole. Aggregates of such data for an industry reflect not only the primary activities of the establishments but also their activities in the manufacture of secondary products as well as their miscellaneous activities (contract work on materials owned by others, repair work, etc.). This fact should be taken into account when comparing industry statistics (tables 1 through 5a) with product statistics (table 6) showing shipments by all industries of the primary products of the specified industry. The extent of the "product mix" is indicated in table 5b, which shows the value of primary and secondary products shipped by establishments classified in the specified industry and the value of primary products of the industry shipped as secondary products by establishments classified in other industries.

Small single-establishment companies with up to 20 employees (cutoff varied by industry) were excluded from the mail portion of the census. For these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated), data on payrolls and receipts were obtained from administrative records of other Federal agencies. The remaining statistics were developed from industry averages.

Establishment data were tabulated based on industry definitions included in the 1987 Standard Industrial Classification (SIC) Manual¹. The 1987 edition represents a major revision for manufacturing industries from the 1972 edition and its 1977 supplement. In addition to the 1987 SIC revision, changes were made to the product class (five-digit) and product code (seven-digit) categories. The

product class and product code comparability between the 1987 and 1982 censuses is shown in the appendixes. These appendixes present, in tabular form, the linkage from 1987 to 1982.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES

This industry is made up of establishments primarily engaged in manufacturing or assembling complete passenger automobiles, trucks, commercial cars and buses, and special purpose motor vehicles which are for highway use. This industry also includes establishments primarily engaged in manufacturing chassis and passenger car bodies. Such establishments may also manufacture motor vehicle parts, but establishments primarily engaged in manufacturing motor vehicle parts except chassis and passenger car bodies are classified in industry 3714. Establishments primarily engaged in manufacturing truck and bus bodies and in assembling them on purchased chassis are classified in industry 3713; those manufacturing motor homes on purchased chassis are classified in industry 3716; those manufacturing motorcycles are classified in industry 3751; those manufacturing industrial tractors are classified in industry 3537; those manufacturing other wheel tractors, except contractors' off-highway types, are classified in industry 3523; those manufacturing tracklaying and contractors' off-highway type tractors are classified in industry 3531; those manufacturing combat tanks and self-propelled weapons are classified in industry 3795; and those manufacturing stamped body parts for passenger cars are classified in industry 3465.

The 1987 definition of this industry is the same as that used in the 1972/7 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1987 Census of Manufactures, Industry 3711, Motor Vehicles and Car Bodies, had employment of 284.4 thousand. The employment figure was 18 percent above the 240.1 thousand reported in 1982. Compared with 1986, employment increased 1 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses. The leading States in employment in 1987 were Michigan, Ohio, Missouri, and Wisconsin, accounting for 62 percent of the industry's employment. These

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

same States were the leaders in 1982, when they accounted for approximately 60 percent of the industry's employment.

The total value of shipments for establishments classified in this industry was \$133.3 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry to which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 3711 shipped \$128.7 billion of motor vehicles and car body products considered primary to the industry, \$3.9 billion of secondary products, and had \$751.2 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in the industry was 97 percent (specialization ratio). In 1982, the specialization ratio was 95 percent.

Establishments in this industry also accounted for 98 percent of products considered primary to the industry no matter where they actually were produced (coverage ratio). In 1982, the coverage ratio was 99 percent. The products primary to industry 3711, no matter in what industry they were produced, appear in table 6a and aggregate to \$130.9 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and electric energy used by establishments classified in the motor vehicles and car bodies industry amounted to \$97.5 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with up to 10 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 1 percent of total value of shipments.

INDUSTRY 3713, TRUCK AND BUS BODIES

This industry is made up of establishments primarily engaged in manufacturing truck and bus bodies and cabs for sale separately or for assembly on purchased chassis, or in assembling truck and bus bodies on purchased chassis. Establishments primarily engaged in manufacturing complete trucks and buses are classified in industry 3711; those manufacturing stamped body parts for trucks and buses are classified in industry 3465; those manufacturing truck trailers and demountable cargo containers are classified in industry 3715; those manufacturing cabs for agricultural tractors are classified in industry 3523; those manufacturing cabs for industrial trucks are classified in industry 3537; and those manufacturing cabs for off-highway construction trucks are classified in industry 3531.

The 1987 definition of this industry is the same as that used in the 1972/7 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1987 Census of Manufactures, Industry 3713, Truck and Bus Bodies, had employment of 37.8 thousand. The employment figure was 35 percent above the 28.1 thousand reported in 1982. Compared with 1986, employment increased 14 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses. The leading States in employment in 1987 were Pennsylvania, Indiana, Ohio, and California. These same States were the leaders in 1982.

The total value of shipments establishments classified in this industry was \$4.6 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry to which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 3713 shipped \$4.2 billion of truck and bus body products considered primary to the industry, \$184.7 million of secondary products, and had \$222.9 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in the industry was 96 percent (specialization ratio). In 1982, the specialization ratio was 93 percent.

Establishments in this industry also accounted for 93 percent of products considered primary to the industry no matter where they actually were produced (coverage ratio). In 1982, the coverage ratio was 94 percent. The products primary to industry 3713, no matter in what industry they were produced, appear in table 6a and aggregate to \$4.5 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and electric energy used by establishments classified in the truck and bus bodies industry amounted to \$2.7 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with up to 20 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 14 percent of total value of shipments.

INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES

This industry is made up of establishments primarily engaged in manufacturing motor vehicles parts and accessories, but not engaged in manufacturing complete motor vehicles or passenger car bodies. Establishments primarily engaged in manufacturing or assembling complete automobiles and trucks are classified in industry 3711; those manufacturing tires and tubes are classified in industry 3011; those manufacturing automobile glass are classified

in major group 32; those manufacturing automobile stampings are classified in industry 3465; those manufacturing vehicular lighting equipment are classified in industry 3647; those manufacturing ignition systems are classified in industry 3694; those manufacturing storage batteries are classified in industry 3691; and those manufacturing carburetors, piston rings, and engine intake and exhaust valves are classified in industry 3592.

The 1987 definition of this industry is the same as that used in the 1972/7 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1987 Census of Manufactures, Industry 3714, Motor Vehicle Parts and Accessories, had employment of 389.1 thousand. The employment figure was 21 percent above the 321.4 thousand reported in 1982. The leading States in employment in 1987 were Michigan, Ohio, Indiana, and New York. These same States were the leaders in 1982.

The total value of shipments establishments classified in this industry was \$62.0 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry to which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 3714 shipped \$54.9 billion of motor vehicle parts and accessories products considered primary to the industry, \$5.2 billion of secondary products, and had \$1.9 billion of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in the industry was 91 percent (specialization ratio). In 1982, the specialization ratio was 93 percent.

Establishments in this industry also accounted for 90 percent of products considered primary to the industry no matter where they actually were produced (coverage ratio). In 1982, the coverage ratio was 86 percent. The products primary to industry 3714, no matter in what industry they were produced, appear in table 6a and aggregate to \$60.8 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and electric energy used by establishments classified in the motor vehicle parts and accessories industry amounted to \$35.6 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with up to 20 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 5 percent of total value of shipments.

INDUSTRY 3715, TRUCK TRAILERS

This industry is made up of establishments primarily engaged in manufacturing truck trailers, truck trailer chassis for sale separately, detachable trailer bodies (cargo

containers) for sale separately, and detachable trailer (cargo container) chassis, for sale separately. Products of this industry also are collected in the Current Industrial Report M-37L, Truck Trailers.

The 1987 definition of this industry is the same as that used in the 1972/7 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1987 Census of Manufactures, Industry 3715, Truck Trailers, had employment of 27.5 thousand. The employment figure was 46 percent above the 18.8 thousand reported in 1982. The leading States in employment in 1987 were Texas, Indiana, California, and Pennsylvania. These same States were the leaders in 1982.

The total value of shipments for establishments classified in this industry was \$3.4 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry to which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 3715 shipped \$3.1 billion of truck trailer products considered primary to the industry, \$135.8 million of secondary products, and had \$195.7 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in the industry was 96 percent (specialization ratio). In 1982, the specialization ratio was 95 percent.

Establishments in this industry also accounted for 99 percent of products considered primary to the industry no matter where they actually were produced (coverage ratio). In 1982, the coverage ratio was 95 percent. The products primary to industry 3715, no matter in what industry they were produced, appear in table 6a and aggregate to \$3.1 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and electric energy used by establishments classified in the truck trailers industry amounted to \$2.3 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with up to 10 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 6 percent of total value of shipments.

INDUSTRY 3716, MOTOR HOMES

This industry is made up of establishments primarily engaged in manufacturing self-contained motor homes on purchased chassis. Establishments engaged in manufacturing self-contained motor homes on chassis manufactured in the same establishment are classified in industry 3711. Establishments primarily engaged in manufacturing mobile homes are classified in industry 2451; and those

manufacturing travel trailers and pickup campers are classified in industry 3792. Establishments primarily engaged in van conversion on a custom basis are classified in Services, industry 7532.

The 1987 definition of this industry is the same as that used in the 1972/7 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1987 Census of Manufactures, Industry 3716, Motor Homes, had employment of 15.1 thousand. The employment figure was 110 percent above the 7.2 thousand reported in 1982. Compared with 1986, employment increased 26 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses. The leading States in employment in 1987 were Indiana, Iowa, California, and Michigan. These same States were the leaders in 1982.

The total value of shipments for establishments classified in this industry was \$2.5 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry to which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 3716 shipped \$2.3 billion of motor home products considered primary to the industry, \$124.7 million of secondary products, and had \$79.2 million of miscellaneous receipts,

resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in the industry was 95 percent (specialization ratio). In 1982, the specialization ratio was 97 percent.

Establishments in this industry also accounted for 96 percent of products considered primary to the industry no matter where they actually were produced (coverage ratio). In 1982, the coverage ratio was 88 percent. The products primary to industry 3716, no matter in what industry they were produced, appear in table 6a and aggregate to \$2.4 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and electric energy used by establishments classified in the motor homes industry amounted to \$1.8 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with up to 10 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 9 percent of total value of shipments.

Table 1a. Historical Statistics for the Industry: 1987 and Earlier Years

[1987 industry definitions are the same as in the 1972/77 Standard Industrial Classification (SIC) system. Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Year ¹	Companies ² (no.)	All establishments ³		All employees		Production workers			Value added by manufac- ture ⁴ (million dollars)	Cost of materials ⁵ (million dollars)	Value of shipments (million dollars)	New capital expend- itures ⁶ (million dollars)	End-of- year inventories ⁴ (million dollars)	Ratios	
		Total (no.)	With 20 employ- ees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Spe- cial- ization ⁷ (per- cent)	Cover- age ⁸ (per- cent)
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES															
1987 Census	351	413	174	284.4	10 376.4	235.5	472.7	8 192.3	36 117.7	97 520.4	133 345.6	4 121.4	4 621.6	97	98
1986 ASM	(NA)	(NA)	(NA)	280.5	10 261.7	233.8	479.5	8 257.1	31 846.0	93 965.0	125 869.6	3 912.8	4 402.8	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	295.8	10 670.3	249.7	522.4	8 724.1	28 061.1	94 220.6	122 327.4	2 904.7	4 941.8	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	296.2	10 192.2	247.6	564.4	8 159.6	27 668.1	90 435.0	118 066.0	2 420.9	5 083.7	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	260.7	8 266.6	216.5	446.2	6 583.6	22 608.0	73 818.2	95 930.8	1 106.4	4 558.7	(NA)	(NA)
1982 Census	284	355	152	240.1	6 821.9	193.5	364.2	5 261.5	15 455.8	55 520.0	70 739.7	2 368.3	3 621.2	95	99
1981 ASM	(NA)	(NA)	(NA)	271.9	7 599.8	223.4	430.8	6 007.5	15 620.6	58 326.4	74 273.1	4 697.2	3 578.5	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	274.2	6 904.0	220.6	427.4	5 399.6	13 817.4	52 297.2	66 257.4	2 290.4	4 123.1	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	348.5	8 149.5	292.0	590.9	6 496.8	20 752.7	64 226.7	85 147.4	1 905.6	4 491.8	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	359.1	7 845.7	303.5	628.4	6 358.3	20 490.6	64 614.6	84 900.9	1 876.9	4 410.4	(NA)	(NA)
1977 Census	254	322	119	343.6	7 077.6	289.9	620.4	5 724.9	18 723.7	58 131.6	76 517.8	1 706.1	4 010.8	95	99
1976 ASM	(NA)	(NA)	(NA)	324.3	5 876.5	273.8	559.8	4 731.8	15 843.7	47 190.2	62 717.4	1 046.9	3 380.0	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	282.5	4 339.9	235.1	447.0	3 404.5	10 441.0	34 795.2	45 340.2	655.7	2 639.6	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	320.2	4 600.9	262.2	514.8	3 568.1	10 849.4	33 167.2	43 868.5	1 042.9	2 898.9	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	368.8	5 146.8	309.1	657.4	4 096.6	13 666.0	36 676.8	50 227.7	805.9	2 531.8	(NA)	(NA)
1972 Census	167	231	119	339.2	4 299.5	284.0	587.9	3 405.4	11 782.5	31 169.5	42 905.6	917.2	2 183.9	96	99
INDUSTRY 3713, TRUCK AND BUS BODIES															
1987 Census	658	716	325	37.8	851.3	28.9	58.3	584.3	1 978.4	2 672.2	4 588.7	88.5	859.5	96	93
1986 ASM	(NA)	(NA)	(NA)	33.2	709.7	24.8	50.0	485.0	1 715.0	2 031.8	3 686.3	82.3	685.2	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	31.7	642.3	24.0	46.5	444.3	1 597.4	1 904.2	3 473.2	63.3	594.0	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	32.8	624.6	25.1	49.9	441.9	1 498.5	1 807.7	3 255.7	97.1	562.7	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	26.6	490.3	20.1	39.8	345.6	1 515.7	1 327.2	2 833.6	49.8	427.5	(NA)	(NA)
1982 Census	636	680	277	28.1	497.2	21.1	40.0	344.2	1 176.9	1 304.3	2 463.6	49.2	412.1	93	94
1981 ASM	(NA)	(NA)	(NA)	29.6	487.3	22.9	43.6	343.8	1 005.5	1 313.9	2 314.9	44.1	393.2	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	33.5	491.2	26.2	49.3	344.7	963.2	1 181.4	2 123.1	33.0	408.8	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	35.5	506.2	28.4	54.9	367.7	1 104.6	1 279.9	2 355.4	48.0	400.5	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	36.4	477.8	28.8	55.3	338.1	996.1	1 283.6	2 292.5	39.3	361.2	(NA)	(NA)
1977 Census ¹⁰	769	820	313	34.8	428.6	27.4	53.9	307.6	946.3	1 076.2	2 003.3	44.2	352.1	94	93
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES															
1987 Census	2 291	2 807	1 323	389.1	11 946.8	309.0	636.9	9 023.1	26 425.7	35 570.0	62 007.3	2 300.6	5 635.1	91	90
1986 ASM	(NA)	(NA)	(NA)	376.6	11 537.3	298.7	622.6	8 755.0	24 373.5	33 019.5	57 393.9	2 644.0	5 428.7	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	385.4	11 649.6	308.7	645.2	8 935.4	26 093.7	31 551.5	57 931.0	2 962.0	5 443.1	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	381.6	10 649.9	306.3	645.2	8 185.5	23 887.7	28 986.1	52 583.1	1 725.0	5 272.9	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	338.0	8 876.2	267.3	549.0	6 728.4	21 592.6	23 092.6	44 415.4	1 056.2	4 424.0	(NA)	(NA)
1982 Census	2 000	2 420	1 111	321.4	7 614.0	251.1	481.8	5 614.2	16 764.6	19 007.0	36 293.1	1 791.7	3 945.2	93	86
1981 ASM	(NA)	(NA)	(NA)	359.4	8 412.6	285.2	548.5	6 332.6	17 253.6	19 847.1	37 080.9	3 309.4	4 450.6	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	369.1	7 886.4	287.2	549.3	5 869.0	14 719.3	17 974.3	32 881.2	3 060.1	4 565.3	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	459.1	9 087.0	372.9	745.7	7 008.8	18 033.5	22 062.3	39 807.2	2 750.7	5 091.3	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	475.8	9 099.3	391.1	811.3	7 145.4	18 377.0	22 193.2	40 283.3	2 457.8	4 537.3	(NA)	(NA)
1977 Census	2 194	2 623	997	450.7	8 004.0	372.5	777.2	6 284.9	16 263.8	19 749.7	35 750.8	1 833.2	4 124.1	94	87
1976 ASM	(NA)	(NA)	(NA)	410.0	6 453.6	339.9	698.8	5 074.0	13 709.4	15 858.7	29 024.4	962.1	3 667.8	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	362.0	4 962.5	294.4	577.0	3 799.1	9 986.3	11 960.8	22 030.1	1 114.4	2 885.1	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	410.1	5 247.7	337.1	675.9	4 069.9	10 250.0	11 686.4	21 656.0	1 290.1	3 139.8	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	444.1	5 491.4	371.1	782.4	4 356.9	10 641.3	11 273.2	21 606.5	1 033.6	2 633.3	(NA)	(NA)
1972 Census	1 746	2 119	935	400.9	4 601.5	332.3	696.0	3 620.3	9 164.7	9 330.4	18 333.5	1 113.1	2 049.6	94	86
INDUSTRY 3715, TRUCK TRAILERS															
1987 Census	308	337	182	27.5	570.2	21.7	43.1	406.4	1 130.8	2 314.3	3 433.5	45.7	474.1	96	99
1986 ASM	(NA)	(NA)	(NA)	23.6	492.4	18.1	36.0	347.6	786.8	1 898.8	2 714.3	931.6	370.0	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	26.4	533.1	20.4	39.6	376.0	817.1	2 116.8	2 931.8	66.1	447.0	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	27.9	524.0	22.1	43.5	378.6	1 036.5	2 302.6	3 311.1	35.8	452.1	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	21.6	394.0	16.4	32.3	272.0	670.9	1 508.3	2 171.6	38.8	454.6	(NA)	(NA)
1982 Census	286	325	154	18.8	339.6	14.0	27.1	223.2	592.2	1 193.6	1 820.6	39.7	342.8	95	95
1981 ASM	(NA)	(NA)	(NA)	25.6	410.4	20.0	39.2	288.8	653.9	1 523.5	2 206.2	955.3	369.5	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	27.7	412.2	21.1	39.4	280.5	834.3	1 580.7	2 435.8	55.2	440.6	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	35.7	476.4	28.3	53.8	341.7	1 134.9	1 993.3	3 088.2	37.1	493.4	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	32.0	403.0	25.7	49.5	286.8	939.4	1 604.0	2 498.0	39.0	448.1	(NA)	(NA)
1977 Census	316	353	165	28.1	322.0	22.5	43.1	229.9	645.9	1 285.3	1 910.1	36.2	355.0	94	96
1976 ASM	(NA)	(NA)	(NA)	21.4	234.4	16.4	31.0	158.3	487.6	816.5	1 297.3	14.5	239.0	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	18.6	187.2	13.9	25.6	120.8	356.1	536.0	921.6	32.6	234.1	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	30.4	276.0	24.2	45.1	197.5	568.5	1 087.3	1 636.9	29.7	308.6	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	29.9	249.7	23.9	46.0	182.7	506.1	865.2	1 369.5	28.0	260.2	(NA)	(NA)
1972 Census	215	255	139	24.7	205.6	19.7	37.8	149.1	449.3	684.8	1 117.9	14.6	190.9	96	94
INDUSTRY 3716, MOTOR HOMES															
1987 Census	144	165	81	15.1	316.9	11.8	23.4	212.0	688.6	1 811.4	2 486.8	18.7	315.0	95	96
1986 ASM	(NA)	(NA)	(NA)	12.0	232.4	9.5	18.2	154.0	492.0	1 382.3	1 887.2	22.3	212.9	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	12.2	223.2	9.7	18.9	149.8	558.1	1 337.1	1 872.2	41.8	236.3	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	14.2	244.4	11.7	22.4	162.4	613.9	1 446.7	2 080.1	28.3	192.2	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	11.7	246.8	9.2	19.1	139.9	582.2	1 388.4	1 934.3	13.9	191.2	(NA)	(NA)
1982 Census	79	87	55	7.2	120.6	5.7	10.2	79.3	304.0	653.1	952.7	15.5	131.9	97	88
1981 ASM	(NA)	(NA)	(NA)	9.1	117.6	6.									

Table 1a. Historical Statistics for the Industry: 1987 and Earlier Years—Con.

⁴Beginning with the 1982 Census of Manufactures, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior Censuses and annual surveys of manufactures in which respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, inventories and value added by manufacture are not comparable to prior-year data.
⁵Detailed data on materials consumed by type are shown in table 7.
⁶Detailed data on new machinery and equipment expenditures are provided in table 3c.
⁷Represents ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for establishments classified in the industry.
⁸Represents ratio of primary products shipped by establishments classified in industry to total shipments of such products by all manufacturing establishments, wherever classified.
⁹Estimates for new capital expenditures have associated standard errors of 15 percent or more and may be of limited reliability. Estimates for other data items are of acceptable reliability.
¹⁰Industry was defined or redefined for 1977 Census of Manufactures; data are available only for years shown.

Table 1b. Selected Operating Ratios for the Industry: 1987 and Earlier Years

[1987 industry definitions are the same as in the 1972/77 Standard Industrial Classification (SIC) system. Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Year	Payroll per employee (dollars)	Production workers as percent of total employment (percent)	Annual hours of production workers (number)	Average hourly earnings of production workers (dollars)	Cost of materials as percent of value of shipments (percent)	Cost of materials and payroll as percent of value of shipments (percent)	Value added per employee (dollars)	Payroll as percent of value added (percent)	Value added per production worker hour (dollars)
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES									
1987 Census.....	36 485	83	2 007	17.33	73	81	126 996	29	76.41
1986 ASM.....	36 583	83	2 051	17.22	75	83	113 533	32	66.42
1985 ASM.....	36 072	84	2 092	16.70	77	86	94 865	38	53.72
1984 ASM.....	34 409	84	2 279	14.46	77	85	93 410	37	49.02
1983 ASM.....	31 709	83	2 061	14.75	77	86	86 720	37	50.67
1982 Census.....	28 412	81	1 882	14.45	78	88	64 372	44	42.44
1981 ASM.....	27 950	82	1 928	13.94	79	89	57 450	49	36.26
1980 ASM.....	25 178	80	1 937	12.63	79	89	50 392	50	32.33
1979 ASM.....	23 384	84	2 024	10.99	75	85	59 549	39	35.12
1978 ASM.....	21 848	85	2 071	10.12	76	85	57 061	38	32.61
1977 Census.....	20 598	84	2 140	9.23	76	85	54 493	38	30.18
1976 ASM.....	18 120	84	2 045	8.45	75	85	48 855	37	28.30
1975 ASM.....	15 362	83	1 901	7.62	77	86	36 959	42	23.36
1974 ASM.....	14 368	82	1 963	6.93	76	86	33 883	42	21.07
1973 ASM.....	13 955	84	2 127	6.23	73	83	37 055	38	20.79
1972 Census.....	12 675	84	2 070	5.79	73	83	34 736	36	20.04
INDUSTRY 3713, TRUCK AND BUS BODIES									
1987 Census.....	22 521	76	2 017	10.02	58	77	52 339	43	33.93
1986 ASM.....	21 376	75	2 016	9.70	55	74	51 657	41	34.30
1985 ASM.....	20 261	76	1 938	9.55	55	73	50 391	40	34.35
1984 ASM.....	19 042	77	1 988	8.86	56	75	45 686	42	30.03
1983 ASM.....	18 432	76	1 980	8.68	47	64	56 981	32	38.08
1982 Census.....	17 693	75	1 896	8.60	53	73	41 883	42	29.42
1981 ASM.....	16 462	77	1 904	7.89	57	78	33 970	48	23.06
1980 ASM.....	14 662	78	1 882	6.99	56	79	28 752	51	19.54
1979 ASM.....	14 259	80	1 933	6.70	54	76	31 115	46	20.12
1978 ASM.....	13 126	79	1 920	6.11	56	77	27 365	48	18.01
1977 Census.....	12 316	79	1 967	5.71	54	75	27 193	45	17.56
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES									
1987 Census.....	30 704	79	2 061	14.17	57	77	67 915	45	41.49
1986 ASM.....	30 635	79	2 084	14.06	58	78	64 720	47	39.15
1985 ASM.....	30 227	80	2 090	13.85	54	75	67 706	45	40.44
1984 ASM.....	27 908	80	2 106	12.69	55	75	62 599	45	37.02
1983 ASM.....	26 260	79	2 054	12.26	52	72	63 883	41	39.33
1982 Census.....	23 690	78	1 919	11.65	52	73	52 161	45	34.80
1981 ASM.....	23 407	79	1 923	11.55	54	76	48 007	49	31.46
1980 ASM.....	21 366	78	1 913	10.68	55	79	39 879	54	26.80
1979 ASM.....	19 793	81	2 000	9.40	55	78	39 280	50	24.18
1978 ASM.....	19 124	82	2 074	8.81	55	78	38 623	50	22.65
1977 Census.....	17 759	83	2 086	8.09	55	78	36 086	49	20.93
1976 ASM.....	15 740	83	2 056	7.26	55	77	33 438	47	19.62
1975 ASM.....	13 708	81	1 960	6.58	54	77	27 586	50	17.31
1974 ASM.....	12 796	82	2 005	6.02	54	78	24 994	51	15.16
1973 ASM.....	12 365	84	2 108	5.57	52	78	23 961	52	13.60
1972 Census.....	11 477	83	2 094	5.20	51	76	22 860	50	13.17
INDUSTRY 3715, TRUCK TRAILERS									
1987 Census.....	20 735	79	1 986	9.43	67	84	41 120	50	26.24
1986 ASM.....	20 864	77	1 989	9.66	70	88	33 339	63	21.86
1985 ASM.....	20 193	77	1 941	9.49	72	90	30 951	65	20.63
1984 ASM.....	18 781	79	1 968	8.70	70	85	37 151	51	23.83
1983 ASM.....	18 240	76	1 970	8.42	69	88	31 060	59	20.77
1982 Census.....	18 063	74	1 936	8.24	66	84	31 500	57	21.85
1981 ASM.....	16 031	78	1 960	7.37	69	88	25 543	63	16.68
1980 ASM.....	14 880	76	1 867	7.12	65	82	30 119	49	21.18
1979 ASM.....	13 344	79	1 901	6.35	65	80	31 790	42	21.09
1978 ASM.....	12 593	80	1 926	5.79	64	80	29 356	43	18.98
1977 Census.....	11 459	80	1 916	5.33	67	84	22 986	50	14.99
1976 ASM.....	10 953	77	1 890	5.11	63	81	22 785	48	15.73
1975 ASM.....	10 064	75	1 842	4.72	58	78	19 145	53	13.91
1974 ASM.....	9 078	80	1 864	4.38	66	83	18 701	49	12.61
1973 ASM.....	8 351	80	1 925	3.97	63	81	16 926	49	11.00
1972 Census.....	8 323	80	1 919	3.94	61	80	18 190	46	11.89

See footnotes at end of table.

Table 1b. Selected Operating Ratios for the Industry: 1987 and Earlier Years—Con.

[1987 industry definitions are the same as in the 1972/77 Standard Industrial Classification (SIC) system. Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Year	Payroll per employee (dollars)	Production workers as percent of total employment (percent)	Annual hours of production workers (number)	Average hourly earnings of production workers (dollars)	Cost of materials as percent of value of shipments (percent)	Cost of materials and payroll as percent of value of shipments (percent)	Value added per employee (dollars)	Payroll as percent of value added (percent)	Value added per production worker hour (dollars)
INDUSTRY 3716, MOTOR HOMES									
1987 Census	20 987	78	1 983	9.06	73	86	45 603	46	29.43
1986 ASM	19 366	79	1 916	8.46	73	86	41 000	47	27.03
1985 ASM	18 295	80	1 948	7.93	71	83	45 746	40	29.53
1984 ASM	17 211	82	1 915	7.25	70	81	43 232	40	27.41
1983 ASM	21 094	79	2 076	7.32	72	85	49 761	42	30.48
1982 Census	16 750	79	1 789	7.77	69	81	42 222	40	29.80
1981 ASM	12 923	66	1 700	7.27	74	84	32 945	39	29.39
1980 ASM	14 051	60	2 017	5.76	76	92	19 194	73	15.81
1979 ASM	13 052	63	1 893	6.72	77	95	13 881	94	11.70
1978 ASM	12 078	81	1 943	5.04	69	82	30 120	40	19.25
1977 Census	10 697	80	1 922	4.56	72	86	23 089	46	14.98

Note: For qualifications of data, see footnotes on table 1a.

Table 2. Industry Statistics for Selected States: 1987 and 1982

[Excludes data for auxiliaries. States with 150 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area	1987											1982		
	E ¹	All establishments		All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees ² (1,000)	Value added by manufacture (million dollars)
		Total (no.)	With 20 employees or more (no.)	Number ² (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES														
United States -----	-	413	174	284.4	10 376.4	235.5	472.7	8 192.3	36 117.7	97 520.4	133 345.6	4 121.4	240.1	15 455.8
Alabama -----	E5	3	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Arkansas -----	E3	7	3	.3	5.2	.2	.4	3.6	7.9	21.0	30.3	.3	(NA)	(NA)
California -----	-	51	12	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Colorado -----	-	2	1	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Delaware -----	-	2	2	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Florida -----	E3	16	5	.8	18.1	.6	1.2	12.7	49.7	73.1	128.3	5.3	.9	62.2
Georgia -----	-	13	5	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Illinois -----	-	18	9	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Indiana -----	-	35	14	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Kansas -----	-	8	2	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Kentucky -----	-	9	5	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Louisiana -----	-	1	1	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Maryland -----	-	3	1	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Massachusetts -----	-	4	3	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Michigan -----	-	51	29	105.3	3 970.1	85.8	171.6	3 079.9	11 552.1	32 159.8	43 626.8	537.9	FF	(D)
Minnesota -----	-	6	4	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Missouri -----	-	13	9	21.8	833.7	19.0	38.5	702.6	3 829.5	9 913.0	13 687.8	362.7	13.9	1 023.8
New Jersey -----	-	5	2	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
New Mexico -----	-	2	1	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
New York -----	-	15	6	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
North Carolina -----	-	9	2	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
North Dakota -----	-	2	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Ohio -----	-	22	15	36.7	1 291.1	31.9	67.1	1 079.8	5 650.7	14 460.0	20 081.3	277.1	21.4	1 258.9
Oklahoma -----	-	6	3	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Oregon -----	-	7	2	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Pennsylvania -----	-	20	7	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Tennessee -----	-	4	3	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Texas -----	-	14	5	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Utah -----	-	3	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Virginia -----	-	6	4	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Washington -----	-	5	1	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Wisconsin -----	-	19	9	13.7	474.2	11.6	23.8	379.0	1 087.5	3 213.3	4 305.3	(D)	FF	(D)

See footnotes at end of table.

Table 2. Industry Statistics for Selected States: 1987 and 1982—Con.

[Excludes data for auxiliaries. States with 150 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area	1987											1982		
	All establishments		All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees ² (1,000)	Value added by manufacture (million dollars)	
	E1	Total (no.)	With 20 employees or more (no.)	Number ² (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)							Wages (million dollars)
INDUSTRY 3713, TRUCK AND BUS BODIES														
United States -----	E1	716	325	37.8	851.3	28.9	58.3	584.3	1 978.4	2 672.2	4 588.7	88.5	28.1	1 176.9
Alabama -----	E1	14	5	.5	8.8	.4	.8	7.1	28.7	28.8	57.2	(D)	.5	11.4
Arkansas -----	E1	9	6	1.0	17.3	.8	1.9	12.7	36.2	47.9	83.9	(D)	1.0	25.7
California -----	E3	107	51	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.6	88.0
Florida -----	E1	41	18	2.4	45.6	1.7	3.5	28.6	120.5	140.8	258.4	2.7	.7	30.0
Georgia -----	E3	25	12	1.1	19.4	.8	1.7	12.6	35.8	57.9	96.1	(D)	.4	9.2
Illinois -----	E1	25	9	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.3	31.9
Indiana -----	-	41	22	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.9	94.5
Iowa -----	E2	14	8	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Kansas -----	E1	13	6	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.5	7.8
Kentucky -----	E1	10	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	6.6
Maryland -----	E3	8	4	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	6.6
Massachusetts -----	E6	11	6	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.4	16.7
Michigan -----	E2	20	6	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.9	35.2
Minnesota -----	-	14	6	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Mississippi -----	-	7	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	3.4
Missouri -----	E5	21	9	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.0	36.5
Nebraska -----	-	5	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
New Jersey -----	E5	13	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	6.9
New York -----	E2	34	15	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.0	30.0
North Carolina -----	-	26	13	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Ohio -----	-	27	17	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3.4	380.5
Oklahoma -----	-	15	6	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	8.7
Pennsylvania -----	-	46	29	4.5	101.3	3.3	6.5	62.2	243.5	255.4	470.4	(D)	EE	(D)
Rhode Island -----	E9	4	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
South Carolina -----	-	2	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Tennessee -----	-	14	8	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Texas -----	E3	36	15	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Virginia -----	E2	18	11	1.2	28.6	.8	1.6	16.8	37.5	74.0	110.2	2.2	CC	(D)
Wisconsin -----	-	13	6	1.9	49.2	1.5	2.8	33.9	91.1	115.6	205.4	(D)	EE	(D)
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES														
United States -----	-	2 807	1 323	389.1	11 946.8	309.0	636.9	9 023.1	26 425.7	35 570.0	62 007.3	2 300.6	321.4	16 764.6
Alabama -----	-	37	22	9.1	303.6	7.3	15.5	235.0	528.1	875.6	1 390.9	31.6	5.5	298.7
Arizona -----	E1	36	6	1.0	21.2	.7	1.5	13.9	36.6	29.4	61.0	(D)	.3	7.3
Arkansas -----	E1	28	16	3.3	66.0	2.7	5.4	49.7	272.4	194.4	461.2	23.7	2.2	122.1
California -----	E2	456	169	18.3	363.9	14.2	28.0	249.9	892.0	840.9	1 721.2	46.9	13.5	443.7
Colorado -----	E1	36	11	1.1	18.2	.8	1.5	11.3	56.3	46.2	101.3	2.1	.8	26.8
Connecticut -----	E2	21	13	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Florida -----	E3	82	21	1.9	32.1	1.6	3.2	23.0	74.6	68.8	141.5	6.1	1.4	41.9
Georgia -----	E2	59	23	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Illinois -----	E1	144	75	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Indiana -----	-	150	95	34.5	1 140.6	27.7	58.7	872.0	2 502.2	2 730.1	5 326.9	(D)	26.6	1 348.7
Iowa -----	-	43	24	4.1	87.5	3.4	6.7	66.7	356.4	239.1	590.3	9.2	1.8	78.1
Kansas -----	E1	20	7	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.0	39.3
Kentucky -----	E1	31	20	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Maryland -----	-	19	5	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.6	22.0
Massachusetts -----	E2	40	17	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.4	41.1
Michigan -----	-	380	232	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Minnesota -----	E2	26	7	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Mississippi -----	-	25	17	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3.4	324.9
Missouri -----	-	72	49	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Nebraska -----	-	15	6	2.1	42.3	1.8	3.8	34.1	194.6	119.8	315.9	(D)	EE	(D)
Nevada -----	-	8	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
New Hampshire -----	-	3	1	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
New Jersey -----	E3	74	25	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.0	56.4
New York -----	-	118	45	25.0	872.5	20.0	42.0	681.4	1 836.6	2 809.9	4 673.8	(D)	FF	(D)
North Carolina -----	-	65	36	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	8.5	357.4
Ohio -----	-	228	143	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	56.4	2 895.4
Oklahoma -----	-	42	17	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Oregon -----	E1	35	9	1.3	35.3	.9	1.6	23.4	55.1	111.3	165.0	(D)	.7	12.8
Pennsylvania -----	-	85	37	8.1	242.5	6.2	13.6	183.5	558.2	480.7	1 030.8	31.1	7.5	343.2
Rhode Island -----	-	11	3	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
South Carolina -----	-	21	13	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.0	65.6
South Dakota -----	E5	8	3	.2	3.0	.1	.3	2.1	7.9	9.9	17.9	(D)	(NA)	(NA)
Tennessee -----	-	88	46	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	12.2	502.0
Texas -----	E1	128	34	4.1	86.7	3.2	6.6	61.6	226.5	246.2	463.2	37.7	5.5	216.0
Utah -----	E1	11	5	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Virginia -----	E1	33	18	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3.4	200.3
Washington -----	E1	33	11	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.4	16.0
West Virginia -----	-	4	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Wisconsin -----	-	55	32	8.5	284.9	6.9	14.4	221.1	772.9	728.8	1 511.1	19.1	FF	(D)

See footnotes at end of table.

Table 2. Industry Statistics for Selected States: 1987 and 1982—Con.

[Excludes data for auxiliaries. States with 150 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area	1987											1982		
	E¹	All establishments		All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees² (1,000)	Value added by manufacture (million dollars)
		Total (no.)	With 20 employees or more (no.)	Number² (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
INDUSTRY 3715, TRUCK TRAILERS														
United States -----	-	337	182	27.5	570.2	21.7	43.1	406.4	1 130.8	2 314.3	3 433.5	45.7	18.8	592.2
Alabama -----	-	13	9	1.4	26.8	1.1	2.2	20.2	61.0	89.5	150.3	(D)	1.2	26.7
Arkansas -----	E6	8	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
California -----	-	35	22	2.1	52.2	1.6	3.2	33.7	102.2	201.4	298.9	3.8	EE	(D)
Colorado -----	E1	6	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Florida -----	E1	9	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Georgia -----	-	9	7	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Illinois -----	-	10	6	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.6	21.6
Indiana -----	-	12	7	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Iowa -----	-	10	6	.8	17.6	.6	1.2	11.7	21.9	95.9	116.4	(D)	.6	13.1
Kansas -----	-	8	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	12.8
Kentucky -----	-	3	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Louisiana -----	E1	6	3	.3	5.1	.2	.4	2.9	7.2	10.1	17.1	.1	.4	9.1
Minnesota -----	-	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Mississippi -----	-	5	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Missouri -----	-	12	7	1.2	22.2	.9	1.6	15.3	57.4	50.6	107.3	1.8	.4	13.1
Nebraska -----	-	6	3	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
New Jersey -----	-	9	4	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.7	17.0
North Carolina -----	-	7	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Ohio -----	-	10	4	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Oklahoma -----	E1	12	6	.4	7.6	.3	.7	5.4	14.7	19.6	35.3	.4	.6	18.3
Oregon -----	-	8	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Pennsylvania -----	-	25	15	2.0	41.3	1.5	2.8	28.0	91.1	200.8	289.3	4.4	2.2	71.1
South Dakota -----	-	6	4	.5	10.1	.4	.8	5.8	9.6	34.8	44.7	(D)	AA	(D)
Tennessee -----	E1	9	6	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.6	16.2
Texas -----	-	36	20	3.1	60.0	2.5	4.6	45.2	91.4	269.0	361.6	(D)	2.1	58.5
Utah -----	-	3	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Washington -----	E2	13	5	.5	10.3	.4	.7	6.8	17.4	34.8	51.2	.5	BB	(D)
West Virginia -----	-	2	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Wisconsin -----	-	11	7	1.5	29.1	1.3	2.8	24.0	67.9	125.3	191.5	5.2	.7	24.7
INDUSTRY 3716, MOTOR HOMES														
United States -----	-	165	81	15.1	316.9	11.8	23.4	212.0	688.6	1 811.4	2 486.8	18.7	7.2	304.0
Alabama -----	-	2	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
California -----	-	24	17	2.6	50.3	2.1	4.1	35.6	129.6	310.9	433.4	1.6	1.5	71.3
Florida -----	-	3	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Georgia -----	E6	4	3	.2	3.8	.1	.3	2.5	8.6	25.7	34.2	.1	(NA)	(NA)
Indiana -----	-	70	35	6.0	135.6	4.7	9.0	91.2	296.7	755.9	1 043.7	4.9	1.7	75.9
Iowa -----	-	2	2	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Michigan -----	-	11	7	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.5	11.2
Oregon -----	E2	3	3	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Pennsylvania -----	-	1	1	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Texas -----	E2	9	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	12.6

Note: For qualifications of data, see footnotes on table 1a.

¹Payroll and sales data for some small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other Government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate the items shown for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown for those States where estimated value of shipments data based on administrative-record data account for 10 percent or more of figure shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

²Statistics for some producing States have been withheld to avoid disclosing data for individual companies. However, for States with 150 employees or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: AA—150 to 249 employees; BB—250 to 499 employees; CC—500 to 999 employees; EE—1,000 to 2,499 employees; FF—2,500 employees or more.

Table 3a. Summary Statistics for the Industry: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Motor vehicles and car bodies (SIC 3711)	Truck and bus bodies (SIC 3713)	Motor vehicle parts and accessories (SIC 3714)	Truck trailers (SIC 3715)	Motor homes (SIC 3716)
Companies	351	658	2 291	308	144
All establishments	413	716	2 807	337	165
With 1 to 19 employees	239	391	1 484	155	84
With 20 to 99 employees	66	238	728	111	47
With 100 employees or more	108	87	595	71	34
Employment and labor costs:					
Employees	284.4	37.8	389.1	27.5	15.1
Compensation, total	13 886.9	1 037.9	15 389.8	701.0	372.6
Annual payroll	10 376.4	851.3	11 946.8	570.2	316.9
Fringe benefits	3 510.4	186.5	3 443.0	130.9	55.7
Social Security and other legally required payments	1 048.4	83.1	1 135.6	63.7	34.2
Employer payments and other programs	2 462.0	103.5	2 307.4	67.1	21.5

See footnotes at end of table.

Table 3a. Summary Statistics for the Industry: 1987—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Motor vehicles and car bodies (SIC 3711)	Truck and bus bodies (SIC 3713)	Motor vehicle parts and accessories (SIC 3714)	Truck trailers (SIC 3715)	Motor homes (SIC 3716)	
Production workers:						
Average for year	1,000	235.5	28.9	309.0	21.7	11.8
March	do	243.6	28.2	314.0	21.3	11.6
May	do	244.8	28.9	306.5	21.0	11.9
August	do	218.2	29.1	302.1	22.6	11.7
November	do	235.3	29.1	312.0	21.9	12.1
Hours						
January to March	millions	472.7	58.3	636.9	43.1	23.4
April to June	do	125.0	14.0	163.5	10.3	5.9
July to September	do	122.9	14.7	158.3	10.9	6.0
October to December	do	107.3	14.8	155.4	10.9	5.8
Wages	mil dol	8 192.3	584.3	9 023.1	406.4	212.0
Value added by manufacture	do	36 117.7	1 978.4	26 425.7	1 130.8	688.6
Cost of materials ¹	do	97 520.4	2 672.2	35 570.0	2 314.3	1 811.4
Materials, parts, containers, etc., consumed ²	do	96 135.7	2 507.3	32 992.3	2 180.1	1 750.7
Resales	do	534.5	89.6	1 175.1	97.3	40.1
Fuels	do	238.7	14.5	217.2	6.9	4.3
Purchased electricity	do	432.5	27.0	623.8	17.6	7.1
Contract work	do	179.1	33.8	561.6	12.3	9.1
Quantity of electric energy used for heat and power:						
Purchased	mil kWh	8 589.9	480.7	12 355.5	316.8	133.2
Generated less sold	do	(D)	(D)	(D)	-	-
Total value of shipments						
Primary products	mil dol	133 345.6	4 588.7	62 007.3	3 433.5	2 486.8
Secondary products	do	128 701.2	4 181.1	54 910.3	3 102.0	2 282.9
Miscellaneous receipts, total	do	3 893.2	184.7	5 219.2	135.8	124.7
Value of resales	do	751.2	222.9	1 877.9	195.7	79.2
Contract receipts	do	654.5	120.4	1 557.6	129.0	41.6
Sales of scrap and refuse	do	4.9	7.8	89.9	.4	(D)
Custom conversion of vans owned by others	do	25.7	7.1	130.8	8.1	(X)
Receipts for repair work	do	(X)	-	(X)	(D)	25.2
Receipts for installation (or construction) of products of this establishment	do	11.6	40.2	6.9	31.1	(X)
Receipts for research and development work	do	1.8	14.8	11.3	(D)	(X)
Other miscellaneous receipts	do	-	(X)	24.5	(X)	(X)
Miscellaneous receipts, n.s.k.	do	52.7	32.7	56.9	(D)	(X)
Inventories by stage of fabrication:						
Beginning of 1987	mil dol	4 434.8	730.3	5 609.6	437.0	238.6
Finished goods	do	590.4	130.4	1 541.3	62.8	73.6
Work in process	do	1 502.8	333.7	2 008.5	105.0	42.2
Materials and supplies	do	2 341.6	266.2	2 059.9	269.2	122.8
End of 1987	do	4 621.6	859.5	5 635.1	474.1	315.0
Finished goods	do	791.7	126.8	1 567.5	73.8	84.1
Work in process	do	1 594.1	399.1	1 970.6	105.5	44.8
Materials and supplies	do	2 235.8	333.6	2 096.9	294.8	186.1
Primary product specialization ratio	percent	97	96	91	96	95
Coverage ratio	do	98	93	90	99	96

Note: For qualifications of data, see footnotes on table 1a.

¹Data on purchased services for the repair of buildings and machinery and for communication services are not included in cost of materials, etc., but are shown in table 3c.

²Data on materials consumed by type are shown in table 7. Data on amount purchased or transferred from foreign sources are shown in table 3c.

Table 3b. Gross Book Value of Depreciable Assets, Capital Expenditures, Retirements, Depreciation, and Rental Payments: 1987

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Motor vehicles and car bodies (SIC 3711)	Truck and bus bodies (SIC 3713)	Motor vehicle parts and accessories (SIC 3714)	Truck trailers (SIC 3715)	Motor homes (SIC 3716)
Gross book value of depreciable assets:					
Total:					
Beginning of year	21 999.9	769.5	24 234.0	553.4	241.7
New capital expenditures ¹	4 121.4	88.5	2 300.6	45.7	18.7
Used capital expenditures	379.0	5.2	192.1	4.8	2.7
Retirements	760.1	22.6	960.6	24.1	9.2
End of year	25 740.1	840.6	25 766.1	579.8	253.9
Buildings and other structures:					
Beginning of year	5 800.0	213.7	3 932.5	214.7	98.7
New capital expenditures	677.9	21.5	178.0	11.1	3.6
Used capital expenditures	4.8	1.6	38.9	1.2	1.4
Retirements	55.1	.8	49.7	14.7	2.7
End of year	6 427.6	236.1	4 099.6	212.3	101.1
Machinery and equipment:					
Beginning of year	16 199.9	555.8	20 301.5	338.7	143.0
New capital expenditures ¹	3 443.4	67.1	2 122.7	34.5	15.1
Used capital expenditures	374.2	3.5	153.3	3.6	1.2
Retirements	705.0	21.9	910.9	9.4	6.4
End of year	19 312.5	604.5	21 666.5	367.4	152.9
Depreciation charges during 1987:					
Total	2 124.6	67.9	2 124.7	39.7	21.4
Buildings and other structures	324.9	10.5	160.6	8.3	5.3
Machinery and equipment	1 799.6	57.4	1 964.1	31.4	16.1
Rental payments:					
Total	197.1	26.0	179.0	13.6	6.8
Buildings and other structures	32.7	11.7	72.2	7.0	4.3
Machinery and equipment	164.4	14.3	106.8	6.6	2.5

See footnotes at end of table.

Table 3b. Gross Book Value of Depreciable Assets, Capital Expenditures, Retirements, Depreciation, and Rental Payments: 1987—Con.

Note: Retirements and depreciation data for establishments not included in the ASM sample were extrapolated from the historical ratio of retirements or depreciation to assets. These ratios were developed at the industry level.

¹Data on new machinery and equipment expenditures by type are provided in table 3c.

Table 3c. Supplemental Industry Statistics Based on Sample Estimates: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Motor vehicles and car bodies (SIC 3711)		Truck and bus bodies (SIC 3713)		Motor vehicle parts and accessories (SIC 3714)		Truck trailers (SIC 3715)		Motor homes (SIC 3716)	
	Amount (million dollars)	Relative standard error of estimate ¹ (percent)	Amount (million dollars)	Relative standard error of estimate ¹ (percent)	Amount (million dollars)	Relative standard error of estimate ¹ (percent)	Amount (million dollars)	Relative standard error of estimate ¹ (percent)	Amount (million dollars)	Relative standard error of estimate ¹ (percent)
Purchased services:										
Cost of purchased services for the repair of—										
Buildings and other structures	83.6	(X)	(S)	(X)	70.0	(X)	1.8	(X)	1.4	(X)
Response coverage ratio (percent) ²	79.3	(X)	(S)	(X)	76.0	(X)	60.4	(X)	55.7	(X)
Machinery	373.3	(X)	14.4	(X)	521.8	(X)	7.0	(X)	1.9	(X)
Response coverage ratio (percent) ²	79.4	(X)	51.3	(X)	77.4	(X)	58.6	(X)	55.7	(X)
Cost of purchased communication services	89.8	(X)	6.4	(X)	198.5	(X)	4.0	(X)	2.1	(X)
Response coverage ratio (percent) ²	75.6	(X)	55.8	(X)	81.2	(X)	57.2	(X)	55.6	(X)
New machinery and equipment expenditures	3 443.4	(X)	67.1	(X)	2 122.7	(X)	34.5	(X)	15.1	(X)
Automobiles, trucks, etc., for highway use	52.1	1	5.0	19	37.3	5	2.1	11	.9	15
Computers and peripheral data processing equipment	61.2	1	5.6	14	61.9	5	2.7	9	2.5	7
All other	3 330.2	1	56.4	3	2 023.5	1	29.7	2	11.6	2
Adjustment ratio ³	1.6	(X)	1.4	(X)	1.1	(X)	1.4	(X)	1.1	(X)
Cost of materials, components, parts, etc., used	96 135.7	(X)	2 507.3	(X)	32 992.3	(X)	2 180.1	(X)	1 750.7	(X)
Materials purchased or transferred from foreign sources ⁴	12 053.2	1	(S)	(S)	2 973.7	3	36.1	5	42.3	6
Materials purchased or transferred from domestic sources	84 082.4	1	(S)	(S)	30 018.6	1	2 144.0	1	1 708.4	1
Adjustment ratio ³	1.7	(X)	(S)	(X)	1.1	(X)	1.7	(X)	1.4	(X)

¹For description of relative standard error of estimate, see Qualifications of the Data in appendixes.

²Measure of extent to which respondents reported each item. Derived for each item by calculating the ratio of weighted employment for those sample establishments that reported the specific inquiry to total employment for all establishments classified in industry. (See appendixes for explanation of sample weight.)

³Detail has been adjusted upwards to account for nonresponse. Inverse of the ratio shown represents a measure of the response to the inquiry. (See appendixes for further explanation.)

⁴Data may understate the true cost of imported parts, components, and supplies since some respondents do not know the origin of these materials. Includes cases where materials were purchased from secondary suppliers or where they were transferred from company-operated warehouses or other distribution points. Direct purchases from foreign suppliers and importers by domestic manufacturing establishments are believed to be reported accurately.

Table 4. Industry Statistics by Employment Size of Establishment: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and employment size class	E ¹	All establishments (no.)	All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)					
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES												
Total	-	413	284.4	10 376.4	235.5	472.7	8 192.3	36 117.7	97 520.4	133 345.6	4 121.4	4 621.6
Establishments with an average of—												
1 to 4 employees	E9	149	.2	4.6	.2	.4	3.4	12.8	38.7	51.7	(D)	2.2
5 to 9 employees	E9	54	.4	7.7	.3	.7	5.9	24.2	63.4	87.6	.2	2.8
10 to 19 employees	E8	36	.5	9.1	.4	.8	6.7	26.7	62.6	89.4	.6	3.4
20 to 49 employees	E6	42	1.3	31.4	1.0	2.1	19.9	68.3	171.8	239.8	(D)	16.6
50 to 99 employees	E5	24	1.8	37.6	1.4	2.8	26.1	99.3	231.9	335.2	2.4	32.6
100 to 249 employees	E4	20	3.0	68.3	2.2	4.3	46.0	148.6	300.6	449.9	8.2	61.3
250 to 499 employees	-	13	4.4	107.6	3.3	6.8	73.6	256.9	530.1	765.1	11.2	200.2
500 to 999 employees	-	6	4.5	128.1	3.3	6.1	83.1	357.7	1 070.7	1 421.6	5.8	146.6
1,000 to 2,499 employees	-	22	35.5	1 264.0	28.6	55.3	957.1	5 071.4	13 719.4	18 721.4	595.2	951.5
2,500 employees or more	-	47	232.9	8 718.0	195.0	393.6	6 970.4	30 051.6	81 331.3	111 184.1	2 443.5	3 204.4
Covered by administrative records ²	E9	178	.6	11.4	.5	1.1	8.9	33.2	97.9	131.1	2.0	4.2
INDUSTRY 3713, TRUCK AND BUS BODIES												
Total	E1	716	37.8	851.3	28.9	58.3	584.3	1 978.4	2 672.2	4 588.7	88.5	859.5
Establishments with an average of—												
1 to 4 employees	E8	129	.3	4.4	.2	.4	3.0	14.4	16.3	30.7	.7	4.1
5 to 9 employees	E8	103	.7	13.1	.6	1.1	8.9	37.7	41.0	78.6	1.4	11.0
10 to 19 employees	E6	159	2.2	40.8	1.7	3.4	28.5	108.2	123.4	227.2	4.6	63.1
20 to 49 employees	E3	152	4.9	98.6	3.7	7.3	65.0	207.4	272.4	476.8	6.8	75.6
50 to 99 employees	E1	86	5.9	115.2	4.6	9.2	79.3	234.8	339.8	570.6	6.7	98.3
100 to 249 employees	E1	56	8.4	180.5	6.1	12.5	114.3	373.2	513.6	877.8	12.6	183.4
250 to 499 employees	-	21	7.1	172.0	5.3	10.3	109.8	465.9	364.8	789.9	24.3	287.0
500 to 999 employees	-	8	8.3	226.7	6.8	14.0	175.5	536.8	1 000.9	1 537.1	31.5	137.0
1,000 to 2,499 employees	-	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records ²	E9	289	2.1	33.4	1.6	3.2	23.2	92.2	106.9	199.1	4.4	24.7

See footnotes at end of table.

Table 4. Industry Statistics by Employment Size of Establishment: 1987—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and employment size class	E ¹	All establishments (no.)	All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)					
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES												
Total -----	-	2 807	389.1	11 946.8	309.0	636.9	9 023.1	26 425.7	35 570.0	62 007.3	2 300.6	5 635.1
Establishments with an average of—												
1 to 4 employees -----	E9	640	1.3	22.8	1.0	1.9	17.4	49.4	66.0	115.3	4.1	9.8
5 to 9 employees -----	E8	392	2.6	49.1	2.1	4.3	36.8	107.3	134.4	241.1	9.3	22.5
10 to 19 employees -----	E7	452	6.3	115.7	4.9	10.0	85.8	253.5	327.8	579.3	18.4	59.8
20 to 49 employees -----	E4	456	14.1	288.1	10.7	21.6	189.0	658.5	780.0	1 415.8	53.9	195.4
50 to 99 employees -----	E2	272	19.5	378.1	14.7	29.6	247.7	945.1	1 078.6	2 014.0	64.0	274.6
100 to 249 employees -----	E1	286	46.7	993.0	36.0	71.6	668.5	2 481.5	2 993.9	5 434.1	188.1	809.4
250 to 499 employees -----	-	168	58.6	1 404.6	46.1	93.8	1 016.7	3 678.4	4 245.8	7 920.3	343.1	939.0
500 to 999 employees -----	-	81	55.6	1 426.7	44.5	89.5	1 057.1	3 494.4	3 614.4	7 111.9	239.4	795.4
1,000 to 2,499 employees -----	-	34	184.5	7 268.7	149.0	314.7	5 704.3	14 757.6	22 329.0	37 175.4	1 380.3	2 529.3
2,500 employees or more -----	-	26	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records ² -----	E9	1 344	11.4	189.4	9.1	18.5	143.5	386.2	531.1	917.3	33.8	78.0
INDUSTRY 3715, TRUCK TRAILERS												
Total -----	-	337	27.5	570.2	21.7	43.1	406.4	1 130.8	2 314.3	3 433.5	45.7	474.1
Establishments with an average of—												
1 to 4 employees -----	E8	62	.1	1.9	.1	.2	1.3	5.1	7.1	12.3	.1	1.9
5 to 9 employees -----	E9	45	.3	4.7	.2	.4	3.3	8.1	17.6	25.6	.2	4.9
10 to 19 employees -----	E8	48	.6	11.7	.5	1.0	8.0	18.5	38.9	57.5	.5	10.5
20 to 49 employees -----	E2	74	2.4	47.6	1.8	3.6	31.7	90.7	124.7	215.5	2.9	41.4
50 to 99 employees -----	E1	37	2.5	53.9	1.9	3.9	36.5	96.0	151.8	245.7	5.6	51.0
100 to 249 employees -----	-	40	6.3	126.5	5.0	9.6	89.1	263.4	551.2	809.7	13.0	130.6
250 to 499 employees -----	-	18	6.3	122.9	5.1	9.7	89.0	260.3	533.0	797.3	8.5	94.5
500 to 999 employees -----	-	12	9.0	200.9	7.1	14.8	147.6	388.6	890.0	1 269.9	15.0	139.4
1,000 to 2,499 employees -----	-	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records ² -----	E9	137	.9	14.7	.7	1.4	10.0	23.1	54.1	77.2	.6	14.7
INDUSTRY 3716, MOTOR HOMES												
Total -----	-	165	15.1	316.9	11.8	23.4	212.0	688.6	1 811.4	2 486.8	18.7	315.0
Establishments with an average of—												
1 to 4 employees -----	E7	31	.1	1.0	(Z)	.1	.6	2.9	7.2	9.9	.1	1.2
5 to 9 employees -----	E8	26	.2	3.0	.1	.2	2.0	6.6	18.8	25.4	.2	2.8
10 to 19 employees -----	E5	27	.4	6.2	.3	.5	4.2	12.9	45.7	58.7	.3	5.3
20 to 49 employees -----	E4	34	1.1	22.2	.8	1.5	13.8	48.4	147.1	193.0	1.2	19.5
50 to 99 employees -----	E6	13	.9	17.9	.7	1.4	11.6	37.6	106.6	143.3	.7	14.9
100 to 249 employees -----	E1	16	2.6	53.2	1.9	3.5	33.2	132.5	249.8	375.5	2.9	55.8
250 to 499 employees -----	-	13	4.3	93.9	3.7	7.6	69.7	218.7	553.7	766.5	3.1	97.5
500 to 999 employees -----	-	4	5.6	119.4	4.4	8.7	76.9	229.0	682.5	914.4	10.2	118.0
2,500 employees or more -----	-	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records ² -----	E9	57	.3	4.8	.2	.4	3.1	10.3	31.0	41.3	.4	4.5

Note: For qualifications of data, see footnotes on table 1a. Data shown as a (D) are included in underscored figures above.

¹Payroll and sales data for some small single unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other Government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate the items shown for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown for those employment-size classes where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

²Report forms were not mailed to small single unit companies with up to 20 employees (cutoff varied by industry). Payroll and sales data for 1987 were obtained from administrative records supplied by other agencies of the Federal Government. Those data were then used in conjunction with industry averages to estimate the items shown. Data are also included in respective employment-size classes shown.

Table 5a. Industry Statistics by Industry and Primary Product Class Specialization: 1987

[Table presents selected statistics for establishments according to their degree of specialization in products primary to their industry. Measures of plant specialization shown are (1) industry specialization: ratio of primary product shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment; and (2) product class specialization: ratio of largest primary product class shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment. See appendix for method of computing ratios. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry or product class code	Industry or primary product class	All establishments (number)	All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
3711	Motor vehicles and car bodies: All establishments in industry	413	284.4	10 376.4	235.5	472.7	8 192.3	36 117.7	97 520.4	133 345.6	4 121.4
37111	Establishments with this product class primary:										
37112	Passenger cars and chassis for sale separately	56	182.5	6 774.9	152.0	301.8	5 366.6	21 355.0	62 410.8	83 614.1	2 297.6
37113	Trucks, truck tractors, and truck and bus chassis (chassis of own manufacture)	56	85.7	3 202.4	71.0	149.0	2 544.0	13 814.5	32 820.7	46 483.8	732.6
37114	Buses and fire fighting vehicles (chassis of own manufacture)	23	7.2	166.8	5.1	9.5	108.0	395.1	669.5	1 050.8	26.6
37115	Combat vehicles and wheeled tactical vehicles or carriers	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
37116	Passenger car bodies	4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 5a. Industry Statistics by Industry and Primary Product Class Specialization: 1987—
Con.

[Table presents selected statistics for establishments according to their degree of specialization in products primary to their industry. Measures of plant specialization shown are (1) industry specialization: ratio of primary product shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment; and (2) product class specialization: ratio of largest primary product class shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment. See appendix for method of computing ratios. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry or product class code	Industry or primary product class	All establishments (number)	All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
3713	Truck and bus bodies: All establishments in industry	716	37.8	851.3	28.9	58.3	584.3	1 978.4	2 672.2	4 588.7	88.5
	Establishments with this product class primary:										
37131	Truck, bus, and other vehicle bodies	202	21.6	518.9	16.8	33.9	365.8	1 141.1	1 682.9	2 828.1	53.7
37132	Complete vehicles produced on purchased chassis	105	10.1	217.2	7.4	15.0	138.3	536.2	646.6	1 122.8	22.8
3714	Motor vehicle parts and accessories: All establishments in industry	2 807	389.1	11 946.8	309.0	636.9	9 023.1	26 425.7	35 570.0	62 007.3	2 300.6
	Establishments with this product class primary:										
37142	Gasoline engines and gasoline engine parts for motor vehicles, new	184	74.8	2 597.4	59.8	124.0	1 978.9	5 774.5	9 969.8	15 689.2	431.1
37144	Filters for internal combustion engines and motor vehicles, new	43	22.7	652.7	17.4	35.7	473.8	1 203.6	1 454.6	2 714.6	57.3
37145	Exhaust system parts, new	52	15.6	405.2	12.6	25.2	307.5	1 373.1	1 553.4	2 936.3	81.3
37146	Drive train components, new, except wheels and brakes	124	83.8	3 124.9	67.9	143.0	2 465.9	6 575.2	9 531.5	16 179.7	830.5
37147	Motor vehicle wheels, new	32	10.8	263.1	9.1	17.7	203.4	664.5	662.8	1 329.2	42.6
37148	Brake parts and assemblies, new	72	21.5	604.7	16.4	33.1	427.2	1 559.0	2 188.4	3 746.3	106.1
37149	All other motor vehicle parts and accessories, new, n.e.c.	404	113.5	3 385.7	89.4	185.1	2 516.6	7 229.4	7 930.6	15 107.1	612.7
3714A	Rebuilt parts for motor vehicles, excluding carburetors and engine electrical equipment	129	14.6	296.5	11.2	22.3	197.9	717.8	647.3	1 337.7	27.6
3715	Truck trailers: All establishments in industry	337	27.5	570.2	21.7	43.1	406.4	1 130.8	2 314.3	3 433.5	45.7
	Establishments with this product class primary:										
37151	Truck trailers and chassis, with axle rating of 10,000 lb or more	143	24.2	512.8	19.2	38.3	367.8	998.4	2 093.6	3 081.9	41.0
37152	Truck trailers and chassis, with axle rating of less than 10,000 lb	25	1.4	22.2	1.0	1.8	14.7	76.1	95.2	169.7	3.3
3716	Motor homes: All establishments in industry	165	15.1	316.9	11.8	23.4	212.0	688.6	1 811.4	2 486.8	18.7

Note: For qualifications of data, see footnotes on table 1a.

Table 5b. Industry-Product Analysis—Value of Shipments and Primary Product Shipments and Specialization and Coverage Ratios for the Industry: 1987 and Earlier Census Years

[An establishment is assigned to an industry based on shipment values of products representing largest amount considered primary to an industry. Frequently, establishment shipments comprise mixtures of products assigned to an industry (primary), those considered primary to other industries (secondary), and receipts for activities such as merchandising or contract work. Columns A-D show this product pattern for an industry, and column E shows primary product specialization ratio. The extent to which an industry's primary products are shipped by establishments classified in and out of an industry is shown in columns F-H and coverage ratio is shown in column I. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and product group code	Industry and census year	Value of shipments					Value of primary product shipments				
		Total (million dollars)	Primary products (million dollars)	Secondary products (million dollars)	Miscellaneous receipts (million dollars)	Primary product specialization ratio col. B ÷ col. B + C (percent)	Total made in all industries (million dollars)	Made in this industry (million dollars)	Made in other industries (million dollars)	Coverage ratio col. B ÷ col. F (percent)	
		A	B	C	D	E	F	G	H	I	
3711	Motor vehicles and car bodies	1987..	133 345.6	128 701.2	3 893.2	751.2	97	130 856.8	128 701.3	2 155.5	98
		1982..	70 739.7	66 413.7	3 836.8	489.2	95	66 705.6	66 413.7	291.9	99
		1977..	76 517.8	72 691.3	3 447.6	378.9	95	72 979.1	72 691.3	287.8	99
3713	Truck and bus bodies	1987..	4 588.7	4 181.1	184.7	222.9	96	4 482.4	4 181.1	301.3	93
		1982..	2 510.9	2 176.3	151.8	182.8	93	2 304.4	2 176.3	128.2	94
		1977..	2 003.3	1 743.8	118.4	141.2	94	1 880.9	1 743.8	137.1	93
3714	Motor vehicle parts and accessories	1987..	62 007.3	54 910.3	5 219.2	1 877.9	91	60 753.8	54 910.3	5 843.5	90
		1982..	36 293.1	33 111.2	2 587.0	594.9	93	38 414.2	33 111.2	5 303.0	86
		1977..	35 750.8	33 086.1	2 097.7	567.0	94	37 841.8	33 086.1	4 755.7	87
3715	Truck trailers	1987..	3 433.5	3 102.0	135.8	195.7	96	3 138.1	3 102.0	36.1	99
		1982..	1 773.3	1 585.7	90.6	97.0	95	1 667.5	1 585.7	81.7	95
		1977..	1 910.1	1 725.7	110.1	74.3	94	1 807.0	1 725.7	81.3	96
3716	Motor homes	1987..	2 486.8	2 282.9	124.7	79.2	95	2 373.5	2 282.9	90.6	96
		1982..	952.7	908.6	25.9	18.1	97	1 035.7	908.6	127.1	88
		1977..	1 564.5	1 401.4	119.8	43.3	92	1 494.6	1 401.4	93.2	94

Table 6a-1. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendixes. For comparability of product classes and product codes between 1982 and 1987, see appendixes. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of \$100,000 or more	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Product shipments ¹	
			Quantity ²	Value (million dollars)		Quantity ²	Value (million dollars)
3711- --	MOTOR VEHICLES AND CAR BODIES						
	Total	(NA)	(X)	130 856.8	(NA)	(X)	66 705.6
37111 --	Passenger cars, knockdown or assembled, and chassis for sale separately	(NA)	(X)	79 853.3	(NA)	(X)	42 902.3
37111 11	Complete vehicles, knockdown or assembled, including station wagons, ambulances, hearses, and taxicabs if produced on passenger car chassis. For vehicles to be assembled abroad, value reportable on same basis as for domestic interplant shipments of knockdown vehicles (value includes extra equipment billed with vehicles)..... thousands..	20	7 258.3	79 835.3	(NA)	5 234.0	42 902.3
37111 51	Chassis for sale separately	5					
37111 00	Passenger cars and chassis, n.s.k.	(NA)	(X)	17.9	(NA)	(X)	-
37112 --	Trucks, truck tractors, and truck and bus chassis (chassis of own manufacture).....	(NA)	(X)	47 701.1	(NA)	(X)	19 295.5
37112 01	Truck, bus, and other road vehicle chassis fitted with engine, but without cab	4	(D)	(D)			
37112 02	Truck tractors for semitrailers	4	23.3	982.1			
	Truck and other road vehicles fitted with engine and cab, with or without body:						
	Trucks designed primarily for transporting passengers:						
	Passenger carrier, (window) vans:						
37112 03	Designed to transport less than 10 passengers	8	(3)	(3)			
37112 04	Designed to transport 10 passengers or more	1	(3)	(3)			
37112 05	Station wagons on truck chassis	1	(3)	(3)			
37112 06	Motor homes	9	(3)	(3)			
37112 07	Other (ambulance, rescue, hearse, etc.)	5	³¹ 702.6	³¹ 946.4			
	Special purpose:						
37112 08	Concrete mixers	1	(D)	(D)			
37112 09	Other	8	(D)	(D)	(NA)	1 917.6	⁴¹ 294.4
	Trucks designed primarily for the transport of goods:						
	With compression ignition internal combustion piston engine (diesel or semidiesel):						
37112 31	Gross vehicle weight (GVW) not exceeding 5 metric tons (11,023 lb).....	3	(D)	(D)			
	GVW exceeding 5 metric tons, but not exceeding 20 metric tons (44,092 lb):						
37112 32	Cab chassis	6	114.9	3 776.0			
37112 33	Other (complete truck)	4	(D)	(D)			
37112 34	GVW exceeding 20 metric tons	6	31.1	1 470.6			
	With spark ignition internal combustion piston engine (gasoline or gas):						
37112 35	GVW not exceeding 5 metric tons	4	(D)	(D)			
37112 36	GVW exceeding 5 metric tons	2	(D)	(D)			
37112 39	With other engines (turbine, electric, etc.)	(NA)	-	-			
37112 00	Trucks, truck tractors, and truck chassis (chassis of own manufacture), n.s.k.	(NA)	(X)	47.6	(NA)	(X)	1.1
37113 --	Buses (except trolley buses) and fire fighting vehicles (chassis of own manufacture) (see also codes 3713201 and 3713225)	(NA)	(X)	1 198.2	(NA)	(X)	893.5
	Buses, including military:						
37113 01	With compression ignition internal combustion engine (diesel or semidiesel)	11	21.8	1 066.4	15	10.3	785.4
37113 02	With other engines	1					
37113 03	Fire fighting vehicles	8	(S)	79.2	11	5.1	106.7
37113 00	Bus and fire fighting vehicles, n.s.k.	(NA)	(X)	52.6	(NA)	(X)	1.4
37114 --	Combat vehicles, wheeled tactical vehicles or carriers, excluding tanks and self-propelled weapons:						
37114 00	Military vehicles, wheeled tactical vehicles or carriers, excluding tanks and self-propelled weapons	6	(D)	(⁵)	(NA)	(D)	(⁵)
37115 --	Passenger car bodies:						
37115 00	Passenger car bodies	4	(D)	(⁵)	(NA)	(D)	(⁵)
37110 --	Motor vehicles and car bodies, n.s.k.	(NA)	(X)	(NA)	(NA)	(X)	(NA)
37110 00	Motor vehicles, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	⁵¹ 972.4	(NA)	(X)	⁵³ 550.1
37110 02	Motor vehicles, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	131.8	(NA)	(X)	64.3
3713- --	TRUCK AND BUS BODIES						
	Total	(NA)	(X)	4 482.4	(NA)	(X)	2 304.4
37131 --	Truck, bus, and other vehicle bodies (except passenger car bodies) for sale separately	(NA)	(X)	2 735.4	(NA)	(X)	1 672.6
37131 01	Bus bodies	11	²⁹ 0	316.6			
37131 02	Truck cabs	12	(S)	158.9			
	Truck bodies designed primarily for transporting passengers:						
	Passenger carrier (window van) (unit body-cab):						
37131 03	Designed to transport less than 10 passengers	4	(D)	(D)	(NA)	(⁶)	(⁶)
37131 04	Designed to transport 10 passengers or more	1	(D)	(D)			
37131 06	Rescue, ambulance, hearse, etc.	7	(S)	7.7			
37131 07	Other	3	(D)	(D)			

See footnotes at end of table.

Table 6a-1. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendixes. For comparability of product classes and product codes between 1982 and 1987, see appendixes. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987			1982		
		Number of companies with shipments of \$100,000 or more	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Product shipments ¹	
			Quantity ²	Value (million dollars)		Quantity ²	Value (million dollars)
3713--	TRUCK AND BUS BODIES—Con.						
37131 --	Truck, bus, and other vehicle bodies (except passenger car bodies) for sale separately—Con.						
	Truck bodies designed primarily for transporting goods:						
	Vans with unit body-cab:						
37131 11	Multistop	10	(D)	(D)	(NA)	(S)	112.3
37131 13	Other, including panel	8	8.6	52.6			
	Vans with separate cab:						
37131 15	Refrigerated (except food service)	15	*3.9	48.0	24	*2.1	17.2
37131 16	Food service	10	*4.3	39.0	14	3.7	17.8
37131 17	Other	35	*22.6	108.0	34	18.9	67.9
37131 21	Tank	12	*9.6	69.0	20	*7.1	67.1
	Garbage and refuse (packer-types):						
37131 31	Front loading	5	.9	31.2	9	1.1	25.8
37131 32	Rear loading	9	4.2	80.5	12	6.1	67.7
37131 35	Side loading	7	(S)	20.4	8	1.7	26.8
37131 39	Other	7	(S)	6.0	8	**1.0	17.4
37131 43	Beverage	7	*1.8	22.9	9	*2.1	21.3
37131 49	Pickup	6	(S)	6.5	(NA)	(E)	(E)
37131 53	Dump	50	(S)	140.8	56	*24.1	77.7
37131 55	Stake and platform	43	**28.7	45.6	40	*33.8	38.2
37131 57	Other	21	(S)	37.1	38	*27.2	69.8
	Special purpose truck bodies (not designed primarily for transporting passengers or goods):						
37131 61	Utility line service	38	(S)	76.1	53	*38.0	101.5
37131 62	Other mobile service types	10	(S)	86.4	12	13.8	37.5
37131 63	Wrecker	5	1.4	13.9	12	(S)	12.7
37131 69	Other special purpose	18	(S)	82.6	(NA)	(S)	6843.6
37131 00	Truck, bus, and other vehicle bodies, n.s.k.	(NA)	(X)	133.4	(NA)	(X)	50.3
37132 --	Complete vehicles produced on purchased chassis	(NA)	(X)	1 158.5	(NA)	(X)	523.8
37132 01	Buses (see also codes 3711301 and 3711302)	9	(S)	151.8	18	*24.4	160.9
	Trucks designed primarily for transporting passengers:						
37132 02	Rescue, ambulance, hearse, etc.	(NA)	*3.2	101.6	(7)	(7)	(7)
37132 03	Other	4	(S)	7.7			
	Trucks designed primarily for transporting goods:						
	Vans with unit body-cab:						
37132 05	Multistop	4	*1.3	10.8			
37132 06	Other (including panel)	2	(E)	(E)			
	Vans with separate cab:						
37132 07	Refrigerated (except food service)	3	(E)	(E)	(E)	(E)	(E)
37132 08	Food service	—	(S)	(Z)			
37132 09	Other	7	*1.0	9.8			
37132 15	Tank	8	(S)	42.9			
37132 16	Garbage and refuse type (packer-type)	4	.2	5.8			
37132 17	Beverage	4	(S)	26.2			
37132 18	Dump	6	*1.7	20.8			
37132 19	Stake and platform	2	.3	1.3			
37132 21	Other	10	*11.2	*108.2			
	Special purpose vehicle (not designed primarily for transport of passengers or goods):						
37132 25	Firefighting (see also code 3711303)	25	(S)	306.9	*25	*5.6	*207.2
37132 26	Utility line service	11	*1.4	62.0			
37132 27	Other mobile service types	6	(S)	73.9			
37132 28	Wrecker	5	(D)	(10)	*61	*25.7	*152.3
37132 29	Concrete mixer	2	(D)	(10)			
37132 31	Other	19	(S)	*137.3			
37132 00	Complete vehicles produced on purchased chassis, n.s.k.	(NA)	(X)	91.4	(NA)	(X)	3.4
37130 --	Truck and bus bodies, n.s.k.	(NA)	(X)	588.5	(NA)	(X)	108.0
37130 00	Truck and bus bodies, n.s.k., typically for establishments with 20 employees or more (see note)	(NA)	(X)	387.5	(NA)	(X)	68.8
37130 02	Truck and bus bodies, n.s.k., typically for establishments with less than 20 employees (see note)	(NA)	(X)	201.1	(NA)	(X)	39.2

1987 product code	Product	Year	Number of companies with shipments of \$100,000 or more	Product shipments¹		Shipments for replacement including shipments to U.S. motor vehicle manufactures for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity²	Value (million dollars)	Quantity	Value (million dollars)		
3714- --	MOTOR VEHICLE PARTS AND ACCESSORIES								
	Total -----	1987	(NA)	(X)	60 753.8	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	38 414.2	(X)	(X)	(X)	(X)
37142 --	Gasoline engines and gasoline engine parts for motor vehicles, new-----	1987	(NA)	(X)	14 550.5	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	8 274.1	(X)	(X)	(X)	(X)
37142 01	Gasoline engines, new (with or without cylinder heads, fuel pumps, water pumps, and other standard accessories)----- millions--	1987	10	8.0	8 979.0	(S)	1 253.4	6 983.4	742.2
		1982	9	(D)	(D)	(D)	(D)	(D)	(D)
37142 06	Intake manifolds ----- do--	1987	8	*1.4	58.7	(D)	(D)	(D)	(D)
		1982	12	1.0	29.3	.6	15.3	10.4	3.6

See footnotes at end of table.

Table 6a-1. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendixes. For comparability of product classes and product codes between 1982 and 1987, see appendixes. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	Year	Number of companies with shipments of \$100,000 or more	Product shipments ¹		Shipments for replacement including shipments to U.S. motor vehicle manufacturers for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity ²	Value (million dollars)	Quantity	Value (million dollars)		
3714- --	MOTOR VEHICLE PARTS AND ACCESSORIES—								
	Con.								
37142 --	Gasoline engines and gasoline engine parts for motor								
37142 07	vehicles, new—Con. Exhaust manifolds ----- millions..	1987 1982	12 12	8.8 1.7	172.5 30.8	(D) (D)	(D) (D)	72.3 (D)	(D) (D)
37142 08	Crankshafts, engine ----- do..	1987 1982	17 11	(S) .5	61.2 30.7	(S) .3	6.2 1.7	41.5 (D)	13.4 (D)
37142 09	Camshafts, engine ----- do..	1987 1982	12 18	6.1 5.8	169.7 81.9	2.4 3.1	62.6 40.9	87.8 34.5	19.3 6.5
37142 15	Rocker arms and parts -----	1987 1982	8 7	(X) (X)	43.8 47.0	(X) (X)	(S) 20.8	(S) (D)	(S) (D)
37142 16	Valve guides, seats, and tappets -----	1987 1982	8 11	(X) (X)	157.6 282.5	(X) (X)	(S) 41.3	(S) 177.2	(S) 64.0
37142 18	Fuel injection systems ----- millions..	1987 1982	10 8	19.0 3.5	775.7 97.8	(D) (D)	(D) (D)	(D) (D)	(D) -
37142 19	Super-chargers, including turbochargers ----- do..	1987 1982	4 42	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)
37142 21	Flywheels ----- do..	1987 1982	9 11	4.5 6.7	49.7 54.3	(D) 4.9	(D) 8.6	35.1 40.9	(D) 4.8
37142 23	Timing gears ----- do..	1987 1982	7 6	(S) 23.3	33.7 25.8	(S) 19.2	25.5 20.6	6.1 (D)	2.1 (D)
37142 24	Main engine bearings (halves) ----- do..	1987 1982	4 3	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)
37142 25	Connecting rod bearings (halves) ----- do..	1987 1982	10 6	(S) 278.5	67.6 67.3	(S) (D)	10.3 (D)	40.9 (D)	16.4 (D)
37142 26	Other (balance shaft, camshaft, etc.) bearings (halves) ----- do..	1987 1982	6 4	(S) (D)	15.6 (D)	(S) (D)	(S) (D)	(S) (D)	(S) (D)
37142 27	Oil pumps, new, engine ----- do..	1987 1982	14 7	**9.0 4.7	87.1 24.2	(S) 1.2	(S) 6.8	(S) (D)	(S) (D)
37142 28	Oil pumps, new, for power steering ----- do..	1987 1982	4 5	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)
37142 29	Engine oil coolers ----- do..	1987 1982	3 5	(D) (S)	(D) 10.6	(D) (Z)	(D) 3.5	(D) (D)	(D) (D)
37142 31	Fuel pump assemblies, excluding kits ----- do..	1987 1982	18 11	175.5 41.4	614.3 179.2	21.8 17.2	87.3 72.1	494.8 (D)	32.3 (D)
37142 32	Water pump assemblies, excluding kits ----- do..	1987 1982	9 13	(D) 7.3	(D) 99.9	(D) 3.1	(D) 49.5	(D) (D)	(D) (D)
37142 34	Engine cooling fans, including hubs and clutches ----- do..	1987 1982	9 7	6.2 7.1	48.6 88.3	(D) (D)	(D) (D)	31.8 65.0	(D) (D)
37142 35	Radiators, complete ----- do..	1987 1982	17 17	**16.1 9.5	851.2 501.6	(D) 1.7	(D) 101.7	(S) (D)	(D) (D)
37142 36	Radiator shells and cores -----	1987 1982	12 16	(X) (X)	112.8 88.8	(X) (X)	(D) 82.5	(D) 6.1	(D) .2
37142 38	Light duty (car and light truck) thermostats for engine cooling systems ----- millions..	1987 1982	11 9	(D) (¹¹)	(D) (¹¹)	(D) (D)	(D) (D)	(D) (¹¹)	(D) (D)
37142 39	Heavy duty thermostats for engine cooling systems ----- do..	1987 1982	2 5	(D) ¹¹ 106.5	(D) ¹¹ 107.7	(D) (D)	(D) (D)	(D) ¹¹ 77.5	(D) (D)

See footnotes at end of table.

Table 6a-1. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendixes. For comparability of product classes and product codes between 1982 and 1987, see appendixes. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	Year	Number of companies with shipments of \$100,000 or more	Product shipments ¹		Shipments for replacement including shipments to U.S. motor vehicle manufacturers for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity ²	Value (million dollars)	Quantity	Value (million dollars)		
3714- ---	MOTOR VEHICLE PARTS AND ACCESSORIES— Con.								
37142 ---	Gasoline engines and gasoline engine parts for motor vehicles, new—Con.								
37142 41	PCV (positive crankcase ventilation) valves ----- millions..	1987 1982	9 8	*41.3 16.6	21.0 11.6	(S) 8.4	8.5 5.4	11.9 (D)	.6 (D)
37142 48	All other parts and accessories for gasoline automotive engines -----	1987 1982	61 60	(X) (X)	1 339.2 712.3	(X) (X)	277.4 104.8	929.6 547.0	132.2 60.5
37142 00	Gasoline engines and gasoline engine parts for motor vehicles, new, n.s.k.-----	1987 1982	(NA) (NA)	(X) (X)	130.3 -	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37144 ---	Filters for internal combustion engines and motor vehicles, new -----	1987 1982	(NA) (NA)	(X) (X)	1 684.7 1 028.9	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37144 01	Oil filters, light duty (car and light truck) ----- millions..	1987 1982	15 17	**317.8 300.0	586.9 466.7	(S) 232.9	514.1 403.2	64.6 46.3	8.2 17.2
37144 02	Oil filters, heavy duty ----- do..	1987 1982	10 9	**70.4 37.8	183.8 65.7	(S) 16.4	(S) 35.7	(S) (D)	(S) (D)
37144 04	Fuel filters, light duty (car and light truck) ----- do..	1987 1982	17 15	**63.1 61.3	80.8 76.0	(S) 43.3	52.2 41.7	26.6 29.6	2.0 4.6
37144 05	Fuel filters, heavy duty ----- do..	1987 1982	9 9	**70.6 25.7	81.0 45.5	(S) 21.0	(S) 36.2	(S) (D)	(S) (D)
37144 07	Air filters, light duty (car and light truck) ----- do..	1987 1982	12 18	293.8 87.7	442.0 196.9	(D) 80.9	(D) 170.7	(D) 21.5	1.6 4.7
37144 08	Air filters, heavy duty ----- do..	1987 1982	11 11	(S) 21.8	195.6 72.4	(S) 25.0	(S) 63.9	(S) 5.8	(S) 2.7
37144 09	Other filters, including coolant and hydraulic ----- do..	1987 1982	11 8	(S) (S)	66.9 105.7	(S) (D)	(S) (D)	(S) (D)	(S) (D)
37144 00	Filters for internal combustion engines and motor vehicles, new, n.s.k.-----	1987 1982	(NA) (NA)	(X) (X)	47.8 -	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37145 ---	Exhaust system parts, new -----	1987 1982	(NA) (NA)	(X) (X)	2 579.1 1 672.2	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37145 01	Mufflers, including standard, sports or glass pack, and resonators ----- millions..	1987 1982	23 22	(S) *34.2	661.4 412.3	(S) 23.4	357.9 265.9	290.5 (D)	13.0 (D)
37145 02	Pipes, including exhaust, intermediate, connecting, crossover, tail, and side pipes -----	1987 1982	19 31	(X) (X)	481.6 346.8	(X) (X)	303.4 229.5	(D) 109.2	(D) 8.1
37145 03	Catalytic converters ----- millions..	1987 1982	13 10	97.6 70.6	1 384.5 913.1	4.5 (D)	69.3 (D)	1 233.6 724.2	81.6 (D)
37145 00	Exhaust system parts, new, n.s.k.-----	1987 1982	(NA) (NA)	(X) (X)	51.7 -	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37146 ---	Drive train components, new, except wheels and brakes -----	1987 1982	(NA) (NA)	(X) (X)	15 824.2 9 798.9	(X) (X)	(X) (X)	(X) (X)	(X) (X)
	Transmissions, except auxiliary, and parts: Car and light truck type:								
37146 03	Manual ----- millions..	1987 1982	6 4	(S) (D)	350.0 (D)	(D) -	(D) -	332.1 (D)	(D) (D)
37146 05	Automatic ----- do..	1987 1982	13 7	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)

See footnotes at end of table.

Table 6a-1. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendixes. For comparability of product classes and product codes between 1982 and 1987, see appendixes. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	Year	Number of companies with shipments of \$100,000 or more	Product shipments ¹		Shipments for replacement including shipments to U.S. motor vehicle manufacturers for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity ²	Value (million dollars)	Quantity	Value (million dollars)		
3714--	MOTOR VEHICLE PARTS AND ACCESSORIES—Con.								
37146 --	Drive train components, new, except wheels and brakes—Con.								
	Heavy truck and bus type:								
37146 13	Manual ----- millions..	1987	10	(S)	558.8	(D)	(D)	(D)	(D)
		1982	7	1.3	469.2	(D)	(D)	161.5	(D)
37146 15	Automatic ----- do..	1987	4	(D)	(D)	(D)	(D)	(D)	(D)
		1982	4	(D)	(D)	(D)	(D)	(D)	(D)
37146 23	Parts for manual transmissions -----	1987	5	(X)	127.5	(X)	(D)	46.5	(D)
		1982	16	(X)	192.8	(X)	90.0	83.2	19.6
37146 25	Parts for automatic transmissions -----	1987	23	(X)	1 492.0	(X)	(D)	(S)	(D)
		1982	30	(X)	997.6	(X)	162.1	752.4	83.1
37146 28	Transaxles ----- millions..	1987	3	(D)	(D)	(D)	(D)	(D)	(D)
		1982	5	(D)	(D)	(D)	(D)	(D)	(D)
37146 31	Clutch disc and facing assemblies ----- do..	1987	14	(S)	176.6	(S)	75.8	86.1	14.7
		1982	22	22.6	199.6	7.6	66.7	119.6	13.3
37146 33	Gear shifters ----- do..	1987	6	(S)	21.0	(D)	(D)	10.6	(D)
		1982	10	*3.5	19.4	1.2	6.3	(D)	(D)
37146 35	Drive shafts ----- do..	1987	8	(S)	423.4	(S)	87.0	294.9	41.5
		1982	9	*8.8	286.0	3.9	114.3	145.5	26.2
37146 37	Universal joints ----- do..	1987	11	**98.7	389.2	(S)	129.5	236.5	23.2
		1982	8	(S)	225.8	8.9	57.3	(D)	(D)
37146 41	Axles and axle parts -----	1987	35	(X)	4 485.1	(X)	165.4	3 859.0	460.7
		1982	29	(X)	3 468.3	(X)	419.3	2 648.0	401.0
37146 43	Wheel hubs, sold separately ----- millions..	1987	8	(S)	117.4	(D)	(D)	(D)	(D)
		1982	12	3.5	58.2	(D)	(D)	51.6	(D)
37146 49	Other ----- do..	1987	27	(S)	921.9	(S)	45.5	817.4	59.0
		1982	12	6.1	197.4	(D)	(D)	(D)	(D)
37146 00	Drive train components, new, except wheels and brakes, n.s.k. -----	1987	(NA)	(X)	94.4	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	-	(X)	(X)	(X)	(X)
37147 --	Motor vehicle wheels, new -----	1987	(NA)	(X)	1 372.8	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	815.4	(X)	(X)	(X)	(X)
	Car and light truck type:								
37147 01	Steel ----- millions..	1987	16	49.9	642.5	(S)	101.3	520.0	21.2
		1982	15	31.1	447.8	11.5	162.9	258.4	26.5
37147 05	Aluminum ----- do..	1987	9	*9.6	340.7	(S)	84.7	246.7	9.3
		1982	9	2.1	80.6	1.2	45.9	(D)	(D)
37147 07	Other, including combination ----- do..	1987	8	(S)	87.0	(D)	(D)	75.7	(D)
		1982	7	(S)	113.1	(D)	(D)	(D)	(D)
37147 14	Heavy truck and bus type, including those for truck trailers and trailer coaches ----- do..	1987	13	*21.3	288.1	(S)	66.6	217.5	4.1
		1982	8	4.8	173.9	1.6	66.6	98.6	8.7
37147 00	Motor vehicle wheels, n.s.k. -----	1987	(NA)	(X)	14.5	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	-	(X)	(X)	(X)	(X)
37148 --	Brake parts and assemblies, new -----	1987	(NA)	(X)	3 877.6	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	2 211.0	(X)	(X)	(X)	(X)
	Brake cylinders, new:								
37148 01	Wheel, sold separately ----- millions..	1987	7	(S)	124.3	(S)	65.8	45.5	12.9
		1982	6	17.9	66.1	6.8	24.4	(D)	(D)
37148 02	Master, sold separately ----- do..	1987	7	(S)	251.2	(S)	52.1	180.9	18.2
		1982	7	63.5	242.1	12.4	42.7	182.1	17.3
37148 03	Brake valves ----- do..	1987	4	**9.9	115.9	(D)	(D)	104.4	(D)
		1982	6	(D)	(¹²)	(D)	(D)	(D)	(D)
37148 07	Brake assemblies (drum), including backing plates, shoes, linings (except asbestos), cylinders, etc., if sold together ----- do..	1987	14	(S)	338.6	(S)	52.9	222.8	63.0
		1982	16	30.8	291.1	5.5	39.9	236.4	14.9
37148 09	Brake assemblies (disc/caliper), including rotors, calipers, pads (except asbestos), cylinders, etc., if sold together ----- do..	1987	15	32.1	1 223.4	(S)	32.4	1 024.0	167.1
		1982	14	28.8	587.0	6.1	68.4	473.3	45.3
37148 11	Brake drums (with or without hub), sold separately ----- do..	1987	18	21.5	353.6	(D)	(D)	281.1	(D)
		1982	11	13.5	215.1	4.3	73.3	125.1	16.7
37148 13	Brake rotors/discs (with or without hub), sold separately ----- do..	1987	10	15.0	207.8	(S)	37.5	165.1	5.2
		1982	9	14.1	126.7	4.0	24.2	89.5	12.9
37148 15	Brake shoes (with or without lining), sold separately ----- do..	1987	12	24.5	151.8	(S)	108.5	24.8	18.5
		1982	13	8.4	66.9	5.2	44.0	(D)	(D)
37148 17	Metallic or semimetallic brake linings, except asbestos ----- do..	1987	14	(S)	61.0	(S)	(S)	(S)	(S)
		1982	5	6.4	9.0	4.8	7.6	(D)	(D)

See footnotes at end of table.

Table 6a-1. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendixes. For comparability of product classes and product codes between 1982 and 1987, see appendixes. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	Year	Number of companies with shipments of \$100,000 or more	Product shipments ¹		Shipments for replacement including shipments to U.S. motor vehicle manufactures for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity ²	Value (million dollars)	Quantity	Value (million dollars)		
3714- --	MOTOR VEHICLE PARTS AND ACCESSORIES— Con.								
37148 --	Brake parts and assemblies, new—Con. Brake power actuation units:								
37148 21	Air ----- millions..	1987 1982	8 6	(S) 14.8	(¹³) 67.7	(D) 5.6	(D) 18.3	44.3 34.8	(D) 14.6
37148 23	Hydraulic ----- do..	1987 1982	3 4	(S) .7	¹³ 111.0 12.1	(D) (D)	(D) (D)	(D) (D)	(D) (D)
37148 25	Vacuum ----- do..	1987 1982	5 5	11.3 (D)	235.5 (¹²)	(D) (D)	(D) (D)	192.4 (D)	(D) (D)
37148 27	Other brake parts -----	1987 1982	32 27	(X) (X)	574.3 ¹² 527.1	(X) (X)	(S) (D)	(S) (D)	(S) (D)
37148 00	Brake parts and assemblies, new, n.s.k. -----	1987 1982	(NA) (NA)	(X) (X)	129.2 -	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37149 --	All other motor vehicle parts and accessories, new, n.e.c. -----	1987 1982	(NA) (NA)	(X) (X)	16 861.9 12 709.5	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37149 01	Bumper assemblies, bumpers, and parts -----	1987 1982	31 31	(X) (X)	764.1 297.5	(X) (D)	(S) (D)	(S) 205.9	(S) (D)
37149 02	Automotive frames ----- millions..	1987 1982	8 9	(D) 3.6	(¹⁴) 735.2	(D) (D)	(D) (D)	(D) 393.0	(D) (D)
37149 03	Fuel tanks ----- do..	1987 1982	10 8	9.7 .9	251.9 105.8	(S) (D)	169.8 (D)	61.4 (D)	20.7 (D)
37149 04	Heaters, heater cores, and other heater parts -----	1987 1982	21 16	(X) (X)	599.2 219.5	(X) (X)	(D) 18.7	(D) (D)	(D) (D)
37149 05	Shock absorbers ----- millions..	1987 1982	9 6	(S) 71.1	681.8 515.5	(D) (D)	(D) (D)	(D) 190.8	8.4 (D)
37149 06	Tie rod ends -----	1987 1982	8 8	(X) (X)	222.7 184.9	(X) (X)	68.4 66.4	139.4 93.4	15.0 25.1
37149 07	Steering idler arms, drag links, and control arms -----	1987 1982	18 15	(X) (X)	511.4 423.0	(X) (X)	43.4 85.5	389.6 294.5	78.4 43.0
37149 08	Ball joints ----- millions..	1987 1982	10 9	(S) 32.8	189.7 161.8	(S) 7.2	53.1 55.8	118.3 (D)	18.2 (D)
37149 09	Automotive air-conditioning hose assemblies ----- do..	1987 1982	11 12	(S) 18.1	214.1 142.4	(S) (D)	(S) (D)	(S) (D)	(S) -
37149 11	Automotive power steering hose assemblies ----- do..	1987 1982	6 4	(S) 58.7	97.0 45.3	(S) (D)	32.6 (D)	55.2 (D)	9.2 (D)
37149 12	Automotive brake hose assemblies ----- do..	1987 1982	5 5	(S) 37.0	103.7 72.3	(S) 5.8	23.1 11.1	72.1 (D)	8.6 (D)
37149 13	Cruise control units ----- do..	1987 1982	8 5	9.1 10.6	151.6 111.9	(S) (D)	26.0 (D)	123.4 (D)	2.2 (D)
37149 16	Windshield wiper blades ----- do..	1987 1982	7 5	60.2 35.1	113.6 54.6	(D) 19.0	(D) 34.9	(D) (D)	(D) (D)
37149 17	Windshield washer pumps ----- do..	1987 1982	5 7	5.9 5.3	25.3 23.2	(S) 1.5	4.9 6.8	(D) (D)	(D) (D)
37149 20	Steering wheels, columns, and gearboxes ----- do..	1987 1982	16 (NA)	(S) (NA)	982.3 (¹⁵)	(S) (NA)	32.0 (NA)	829.7 (NA)	120.6 (NA)
37149 22	Convertible tops ----- do..	1987 1982	12 7	(S) .3	76.2 29.5	(S) .1	33.4 11.7	(D) (D)	(D) (D)
37149 23	Sunroofs and parts -----	1987 1982	8 8	(X) (X)	46.1 30.7	(X) (D)	(D) (D)	(D) (D)	(D) -
37149 25	Fifth wheels ----- millions..	1987 1982	8 3	^{**} 130.7 (S)	71.3 9.2	(S) (D)	45.7 (D)	23.5 6.2	2.1 (D)
37149 39	All other motor vehicle parts and accessories for cars, trucks, and buses, n.e.c. -----	1987 1982	332 (NA)	(X) (X)	¹⁴ 11 101.5 ¹⁵ 9 138.1	(X) (X)	(S) (D)	(S) (D)	(S) (D)
37149 00	All other motor vehicle parts and accessories for cars, trucks, and buses, n.s.k. -----	1987 1982	(NA) (NA)	(X) (X)	658.5 409.2	(X) (X)	(X) (X)	(X) (X)	(X) (X)

See footnotes at end of table.

Table 6a-1. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendixes. For comparability of product classes and product codes between 1982 and 1987, see appendixes. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	Year	Number of companies with shipments of \$100,000 or more	Product shipments ¹		Shipments for replacement including shipments to U.S. motor vehicle manufactures for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity ²	Value (million dollars)	Quantity	Value (million dollars)		
3714- --	MOTOR VEHICLE PARTS AND ACCESSORIES— Con.								
3714A --	Rebuilt parts for motor vehicles, excluding carburetors and engine electrical equipment -----	1987 1982	(NA) (NA)	(X) (X)	1 156.5 1690.4	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 01	Engines, gasoline ----- millions--	1987 1982	51 51	*.4 .4	268.5 221.2	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 02	Fuel pumps ----- do--	1987 1982	7 10	.7 .8	8.6 6.7	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 03	Water pumps ----- do--	1987 1982	35 39	6.1 5.4	95.1 75.3	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 04	Clutch discs and pressure plates ----- do--	1987 1982	23 44	(S) 6.7	121.3 97.4	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 05	Disc brake pads, mounted ----- do--	1987 1982	6 (NA)	(D) (NA)	(17) (18)	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 06	Power steering pumps ----- do--	1987 1982	13 (NA)	(S) (NA)	23.0 (18)	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 07	Automatic transmissions ----- do--	1987 1982	13 16	(S) *.1	83.7 24.4	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 08	Radiator cores ----- do--	1987 1982	1 (NA)	(D) (NA)	(17) (18)	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 09	Brake shoe assemblies (drum brake) ----- do--	1987 1982	16 43	(S) *20.4	74.1 70.0	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 10	Brake caliper assemblies (disc brake) ----- do--	1987 1982	10 23	1.3 **8.9	15.9 36.4	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 11	Brake master cylinders ----- do--	1987 1982	10 9	(S) (S)	47.6 23.6	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 12	Brake wheel cylinders ----- do--	1987 1982	2 (NA)	(D) (NA)	(17) (18)	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 13	Manual transmissions ----- do--	1987 1982	3 (NA)	(D) (NA)	(17) (18)	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 19	Other -----	1987 1982	43 92	(X) (X)	17295.3 18302.0	(X) (X)	(X) (X)	(X) (X)	(X) (X)
3714A 00	Rebuilt parts for motor vehicles, excluding carburetors, engine electrical equipment, n.s.k. -----	1987 1982	(NA) (NA)	(X) (X)	123.6 33.4	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37140 --	Motor vehicle parts and accessories, n.s.k. -----	1987 1982	(NA) (NA)	(X) (X)	2 846.5 1 013.9	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37140 00	Motor vehicle parts and accessories, n.s.k., typically for establishments with 20 employees or more (see note) -----	1987 1982	(NA) (NA)	(X) (X)	1 927.4 587.6	(X) (X)	(X) (X)	(X) (X)	(X) (X)
37140 02	Motor vehicle parts and accessories, n.s.k., typically for establishments with less than 20 employees (see note) -----	1987 1982	(NA) (NA)	(X) (X)	919.0 426.3	(X) (X)	(X) (X)	(X) (X)	(X) (X)

1987 product code	Product	1987				1982			
		Number of companies with shipments of \$100,000 or more	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Product shipments ¹		Value (million dollars)	
			Quantity ²	Value (million dollars)		Quantity ²	Value (million dollars)		
3715- --	TRUCK TRAILERS								
	Total -----	(NA)	(X)	3 138.1	(NA)	(X)			1 667.5
37151 --	Truck trailers and chassis, 10,000 lb (4.54 metric tons) maximum load rating per axle or more:								
37151 00	Truck trailers and chassis, 10,000 lb (4.54 metric tons) maximum load rating per axle or more (for additional detail, see Current Industrial Report M-37L, Truck Trailers) -----	141	(X)	2 821.4	(NA)	(X)			1 525.5
37152 --	Truck trailers and chassis, less than 10,000 lb (4.54 metric tons) maximum load rating per axle -----	(NA)	(X)	132.1	(NA)	(X)			78.3
37152 01	Tank ----- thousands--	1	(19)	(19)	(NA)				
37152 02	Other ----- do--	41	1914.5	19126.7	(NA)	(NA)			78.3
37150 --	Truck trailers, n.s.k. -----	(NA)	(X)	5.4	(NA)	(X)			63.7
37150 00	Truck trailers, n.s.k., typically for establishments with 10 employees or more (see note) -----	(NA)	(X)	184.6	(NA)	(X)			22.7
37150 02	Truck trailers, n.s.k., typically for establishments with less than 10 employees (see note) -----	(NA)	(X)	77.1	(NA)	(X)			41.0

See footnotes at end of table.

Table 6a-1. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendices. For comparability of product classes and product codes between 1982 and 1987, see appendices. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of \$100,000 or more	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Product shipments ¹	
			Quantity ²	Value (million dollars)		Quantity ²	Value (million dollars)
3716--	MOTOR HOMES PRODUCED ON PURCHASED CHASSIS						
	Total	(NA)	(X)	2 373.5	(NA)	(X)	1 035.7
37160 --	Motor homes built on purchased chassis:						
37160 01	Conventional (Type A)..... thousands.....	28	*43.8	1 638.4	27	21.4	563.0
37160 05	Chopped van (Type C)..... do.....	22	12.1	289.3	33	15.9	344.5
37160 07	Van camper (Type B)..... do.....	8	*2.0	21.5	5	1.7	21.6
37160 21	Converted vans not qualifying as van campers (Type B), motor homes (excluding custom conversions of vans to which you do not hold title)..... do.....	21	**20.6	166.2	21	12.2	79.6
37160 00	Motor homes built on purchased chassis, n.s.k., typically for establishments with 10 employees or more (see note).....	(NA)	(X)	217.4	(NA)	(X)	23.6
37160 02	Motor homes built on purchased chassis, n.s.k., typically for establishments with less than 10 employees (see note).....	(NA)	(X)	40.7	(NA)	(X)	3.4

Note: In 1987 Census of Manufactures, data for establishments of small single unit companies with up to 20 employees were estimated from administrative-record data rather than data actually collected from respondents. Employment cutoffs used for administrative records for each industry and shipments figures are included in code ending with "002". In both 1987 and 1982 Censuses of Manufactures, products not completely identified on standard forms were coded in appropriate product class (five-digit) followed by "00" or to appropriate product group code (four-digit) followed by "000".

- ¹Data reported by all producers, not just those with shipments of \$100,000 or more.
²For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).
³For 1987, product codes 37112 03, 37112 04, 37112 05, 37112 06, and 37112 07 are combined to avoid disclosing data for individual companies.
⁴Product detail for Product Class 37112, Trucks, Truck Tractors, and Truck and Bus Chassis (Chassis of Own Manufacture), was totally restructured in 1987. As a result, data for product codes 37112 01 through 37112 39 are not available for 1982.
⁵For 1987 and 1982, Product Classes 37114, 37115, and product code 37110 00 are combined to avoid disclosing data for individual companies.
⁶For 1982, data for product codes 37131 01, 37131 02, 37131 03, 37131 04, 37131 06, 37131 07, and 37131 49 were included with product code 37131 69 to avoid disclosing data for individual companies.
⁷For 1982, data for product code 37132 02 were combined with product code 37132 25 to avoid disclosing data for individual companies.
⁸For 1987, data for product codes 37132 06 and 37132 07 are combined with product code 37132 21 to avoid disclosing data for individual companies.
⁹For 1982, data for these products were not collected separately and, therefore, are not available.
¹⁰For 1987, data for product codes 37132 28 and 37132 29 were included with product code 37132 31 to avoid disclosing data for individual companies.
¹¹For 1982, data for product code 37142 38 were combined with product code 37142 39 to avoid disclosing data for individual companies.
¹²For 1982, data for product codes 37148 03 and 37148 25 were included with product code 37148 27 to avoid disclosing data for individual companies.
¹³For 1987, data for product code 37148 21 are combined with product code 37148 23 to avoid disclosing data for individual companies.
¹⁴For 1987, data for product code 37149 02 are included with product code 37149 39 to avoid disclosing data for individual companies.
¹⁵For 1982, data for product code 37149 20 were not collected separately but included with product code 37149 39.
¹⁶For 1982, data for product class 3714A were published as product class 37143.
¹⁷For 1987, data for product codes 3714A 05, 3714A 08, 3714A 12, and 3714A 13 were included with product 3714A 19 to avoid disclosing data for individual companies.
¹⁸For 1982, data for product codes 3714A 05, 3714A 06, 3714A 08, 3714A 12, and 3714A 13 were not collected separately but included with product code 3714A 19.
¹⁹For 1987, data for product code 37152 01 are included with product code 37152 02 to avoid disclosing data for individual companies.

Table 6a-2. Related Products From Current Industrial Reports Series—Value of Shipments by All Producers: 1987 and 1982

[Additional detail is provided in the Current Industrial Report series. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987 product shipments		1982 product shipments	
		Quantity	Value (million dollars)	Quantity	Value (million dollars)
	M37L, COMPLETE TRAILERS AND CHASSIS				
37151 --	Complete trailers and chassis (except detachables)	(X)	¹² 719.2	(X)	¹¹ 503.1
	Vans:				
	Closed:				
	Insulated (refrigerated):				
37151 02	Steel..... thousands.....	24.2	522.4	⁽²⁾ ⁽²⁾ 216.7	⁽²⁾ ⁽²⁾ 2319.7
37151 14	Aluminum..... do.....				
37151 60	Flexible reinforced plastics..... do.....				
	Semi-insulated (nonrefrigerated):				
37151 04	Steel..... thousands.....	2.4	30.4	3.3	35.9
37151 16	Aluminum..... do.....				
37151 62	Flexible reinforced plastics..... do.....				
	Drop frame type (12 inch drop or more):				
37151 05	Steel..... thousands.....	5.2	88.2	3.2	47.1
37151 15	Aluminum..... do.....				
37151 64	Flexible reinforced plastics..... do.....				
	Livestock (including livestock drop frame):				
37151 07	Steel..... thousands.....	1.7	36.2	1.0	26.5
37151 17	Aluminum..... do.....				
	All other closed-top dry freight vans:				
37151 09	Steel..... thousands.....	89.7	1 089.3	33.0	347.4
37151 19	Aluminum..... do.....				
37151 68	Flexible reinforced plastics..... do.....				
	Open tops, including low-side grain, fruit, etc.:				
37151 12	Steel..... thousands.....	2.8	49.0	⁽³⁾ ⁽³⁾ 22.6	⁽³⁾ ⁽³⁾ 339.5
37151 21	Aluminum..... do.....				
37151 70	Flexible reinforced plastics..... do.....				

See footnotes at end of table.

Table 6a-2. Related Products From Current Industrial Reports Series—Value of Shipments by All Producers: 1987 and 1982—Con.

[Additional detail is provided in the Current Industrial Report series. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987 product shipments		1982 product shipments	
		Quantity	Value (million dollars)	Quantity	Value (million dollars)
	M37L, COMPLETE TRAILERS AND CHASSIS—Con.				
37151 —	Complete trailers and chassis (except detachables)—Con.				
37151 20	Tank:				
	For flammable liquids (except casing head transport), including aircraft refuelers, all materials	1.6	55.8	1.3	37.8
37151 28	For asphalt, all materials .....	.4	10.1		
37151 30	Coded for chemicals and acids, all materials	1.7	65.8	1.4	44.5
37151 32	All other tank trailers, including noncoded for chemicals and acids, high pressure, food and milk, sanitary and cryogenics, all materials .....	.9	29.3	1.2	32.4
37151 33	Bulk commodity and dry materials, including pneumatic and mechanical discharge (both tank and hopper types), except van	1.4	41.1	1.0	28.6
37151 35	Pole, logging, and pipe .....	.8	9.3	3.4	35.7
37151 37	Platform	15.0	178.2	13.6	152.1
	Low-bed heavy haulers (more than 10 ton capacity), excluding tilt-bed trailers:				
37151 38	Less than 40 ton capacity	6.7	70.4	2.8	36.7
37151 39	40 ton capacity or more	1.6	49.5	1.2	33.0
	Dump trailers and dump chassis, highway type (rear, side, and bottom dump, including nonpneumatic hoppers):				
37151 40	For material	5.9	121.4	3.5	61.8
37151 42	For other, including demolition and excavation	2.2	55.2	1.0	22.1
37151 44	Automobile transport trailers .....	.9	39.8		
37151 49	All other trailers and chassis, except detachable trailers and detachable trailer chassis	5.6	61.8	3.0	82.1
37151 53	Detachable trailer bodies (containers), sold separately .....	.4	13.4	4.1	123.9
37151 54	Detachable trailer chassis and running gear, sold separately	23.0	122.0	4.5	28.2
37151 45	Dollies and converter gear	4.6	119.2	3.1	11.0

¹Total does not include data for product codes 37151 53, 37151 54, and 37151 45.

²For 1982, data for product codes 37151 02, 37151 14, and 37151 60 were combined to avoid disclosing data for individual companies.

³For 1982, data for product codes 37151 21 and 37151 70 were combined to avoid disclosing data for individual companies.

Table 6b. Product Classes—Value of Shipments by All Producers for Specified States: 1987 and 1982

[Million dollars. Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in table 2. Also, product classes are not shown if they are miscellaneous or "not specified by type" classes. Statistics for some States are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1987. For meaning of abbreviations and symbols, see introductory text. For comparability of product classes and product codes between 1982 and 1987 and explanation of terms, see appendixes]

Product class and geographic area	1987 value of product shipments	1982 value of product shipments	Product class and geographic area	1987 value of product shipments	1982 value of product shipments
37111, PASSENGER CARS AND CHASSIS FOR SALE SEPARATELY			37131, TRUCK, BUS, AND OTHER VEHICLE BODIES—Con.		
United States	79 853.3	42 902.3	Indiana	333.6	84.9
Michigan	31 462.7	(NA)	Iowa	61.1	21.2
Missouri	8 051.1	3 460.7	Kansas	9.8	15.8
Ohio	9 393.4	(NA)	Kentucky	18.2	11.4
			Massachusetts	13.4	18.9
			Michigan	76.4	52.2
37112, TRUCKS, TRUCK TRACTORS, AND TRUCK AND BUS CHASSIS (CHASSIS OF OWN MANUFACTURE)			Minnesota	10.0	31.6
United States	47 701.1	19 295.5	Mississippi	23.4	9.1
Michigan	10 062.9	5 245.9	Missouri	10.4	69.5
Ohio	9 952.4	4 317.6	Nebraska	31.3	(NA)
			New Jersey	3.8	7.0
			New York	58.9	23.4
37113, BUSES AND FIRE FIGHTING VEHICLES (CHASSIS OF OWN MANUFACTURE)			North Carolina	111.9	83.6
United States	1 198.2	893.5	Ohio	1 021.5	572.7
			Oklahoma	34.6	12.1
			Pennsylvania	194.1	92.2
37131, TRUCK, BUS, AND OTHER VEHICLE BODIES			Tennessee	58.1	31.6
United States	2 735.4	1 672.6	Texas	51.9	77.7
Alabama	50.3	30.9	Virginia	24.5	37.2
California	191.6	123.6	Washington	3.6	2.2
Florida	16.3	18.6	Wisconsin	158.6	89.2
Georgia	43.9	10.4			
Illinois	36.1	41.5	37132, COMPLETE VEHICLES PRODUCED ON PURCHASED CHASSIS		
			United States	1 158.5	523.8
			California	61.5	21.2
			Florida	200.0	(NA)
			Georgia	106.0	6.2
			Indiana	55.5	137.2
			Kansas	41.6	(NA)

Table 6b. **Product Classes—Value of Shipments by All Producers for Specified States: 1987 and 1982—Con.**

[Million dollars. Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in table 2. Also, product classes are not shown if they are miscellaneous or "not specified by type" classes. Statistics for some States are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1987. For meaning of abbreviations and symbols, see introductory text. For comparability of product classes and product codes between 1982 and 1987 and explanation of terms, see appendixes]

Product class and geographic area	1987 value of product shipments	1982 value of product shipments	Product class and geographic area	1987 value of product shipments	1982 value of product shipments
37132, COMPLETE VEHICLES PRODUCED ON PURCHASED CHASSIS—Con.			37148, BRAKE PARTS AND ASSEMBLIES, NEW		
			United States	3 877.6	2 211.0
Michigan	13.4	(NA)	Alabama	67.0	(NA)
Minnesota	9.4	(NA)	California	107.6	44.8
Missouri	31.1	21.1	Indiana	88.0	205.1
New Jersey	5.3	5.5	Michigan	1 225.8	632.7
New York	37.9	21.8	New Jersey	26.1	(NA)
			Ohio	852.0	685.7
North Carolina	58.9	(NA)	Tennessee	273.8	65.7
Ohio	49.7	20.1			
Pennsylvania	188.0	25.0	37149, ALL OTHER MOTOR VEHICLE PARTS AND ACCESSORIES, NEW, N.E.C.		
Texas	4.3	(NA)	United States	16 861.9	12 709.5
			California	230.0	131.1
37142, GASOLINE ENGINES AND GASOLINE ENGINE PARTS FOR MOTOR VEHICLES, NEW			Colorado	54.7	21.8
United States	14 550.5	8 274.1	Connecticut	91.3	50.6
California	154.9	115.3	Florida	27.0	11.4
Connecticut	47.0	65.4	Georgia	210.1	74.9
Florida	44.6	21.3	Illinois	557.0	208.6
Illinois	210.4	173.9	Indiana	1 584.4	1 538.5
Indiana	662.4	267.1	Iowa	111.1	15.8
Iowa	168.2	10.3	Kansas	6.0	16.9
Massachusetts	37.2	25.8	Kentucky	72.9	21.8
Michigan	6 968.3	4 760.5	Michigan	5 904.9	4 819.3
Missouri	93.8	(NA)	Minnesota	32.4	32.0
New Jersey	21.9	12.5	Mississippi	532.2	(NA)
			Missouri	273.1	192.8
Pennsylvania	31.9	26.2	New Jersey	53.8	24.7
Tennessee	80.4	50.6	New York	590.1	458.5
Texas	98.8	18.2	North Carolina	167.5	145.1
			Ohio	3 181.7	1 715.4
37144, FILTERS FOR INTERNAL COMBUSTION ENGINES AND MOTOR VEHICLES, NEW			Pennsylvania	482.1	340.4
United States	1 684.7	1 028.9	Tennessee	606.7	409.7
California	37.6	24.8	Texas	98.6	27.9
Missouri	76.0	(NA)	Washington	27.2	7.3
37145, EXHAUST SYSTEM PARTS, NEW			3714A, REBUILT PARTS FOR MOTOR VEHICLES, EXCLUDING CARBURETORS AND ENGINE ELECTRICAL EQUIPMENT		
United States	2 579.1	1 672.2	United States	1 156.5	890.4
California	30.4	39.0	Arizona	14.1	3.5
Ohio	178.3	96.7	Arkansas	29.7	(NA)
			California	178.8	93.7
37146, DRIVE TRAIN COMPONENTS, NEW, EXCEPT WHEELS AND BRAKES			Georgia	44.4	63.1
United States	15 824.2	9 798.9	Illinois	56.0	38.3
California	34.9	29.8	Indiana	70.8	60.8
Georgia	35.5	(NA)	Kentucky	38.1	35.6
Illinois	238.4	117.9	Michigan	66.8	7.8
Indiana	2 646.8	1 493.0	Minnesota	8.2	23.2
New York	1 454.7	537.3	Missouri	48.6	22.7
North Carolina	549.7	120.5	New Jersey	35.9	30.6
Ohio	2 460.7	2 191.5	New York	10.6	13.7
South Carolina	60.7	53.2	North Carolina	59.8	26.2
Tennessee	356.7	(NA)	Ohio	47.9	69.2
			Pennsylvania	97.9	91.3
37147, MOTOR VEHICLE WHEELS, NEW			Tennessee	23.4	56.7
United States	1 372.8	815.4	Texas	58.2	65.4
California	488.2	271.0			
Indiana	69.5	(NA)	37151, TRUCK TRAILERS AND CHASSIS, WITH AXLE RATING OF 10,000 LB OR MORE		
Michigan	328.3	303.3	United States	2 821.4	1 525.5
Ohio	141.2	58.6	Alabama	139.8	69.9
			California	156.1	82.2
37152, TRUCK TRAILERS AND CHASSIS, WITH AXLE RATING OF LESS THAN 10,000 LB			Illinois	262.0	71.3
United States	132.1	78.3	Indiana	386.8	201.8
Texas	10.3	(NA)	Kansas	23.6	15.0
			Missouri	58.6	32.2
			New Jersey	92.0	56.0
			Oklahoma	16.8	(NA)
			Oregon	21.0	16.0
			Pennsylvania	248.1	217.9
			Tennessee	114.2	46.2
			Texas	309.4	159.9
			Wisconsin	180.4	60.4

Table 6c. **Historical Statistics for Product Classes—Value Shipped by All Producers: 1987 and Earlier Years**

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For comparability of product classes and product codes between 1982 and 1987 and explanation of terms, see appendixes]

1987 product code	Product class	1987	1986 ¹	1985 ¹	1984 ¹	1983 ¹	1982	1977	1972
3711-	Motor vehicles and car bodies -----	130 856.8	123 951.6	119 632.1	112 358.4	90 935.3	66 705.6	72 979.1	41 045.9
37111	Passenger cars and chassis for sale separately -----	79 853.3	82 002.6	75 996.7	70 729.0	60 853.4	42 902.3	47 798.9	29 246.2
37112	Trucks, truck tractors, and truck and bus chassis (chassis of own manufacture) -----	47 701.1	39 892.0	40 781.4	36 621.1	24 858.7	19 295.5	21 543.5	9 566.1
37113	Buses and fire fighting vehicles (chassis of own manufacture) -----	1 198.2	(D)	(D)	(D)	913.9	893.5		
37114	Combat vehicles and wheeled tactical vehicles or carriers -----	(D)	(D)	(D)	(D)	(D)	(D)	3 636.7	2 233.6
37115	Passenger car bodies -----	(D)	(D)	(D)	(D)	(D)	(D)		
37110	Motor vehicles and car bodies, n.s.k. -----	(D)	(D)	(D)	(D)	(D)	(D)		
3713-	Truck and bus bodies -----	4 482.4	3 557.5	3 411.7	3 095.5	2 808.9	2 304.4	1 880.9	934.4
37131	Truck, bus, and other vehicle bodies -----	2 735.4	2 486.2	2 427.7	2 158.3	2 156.8	1 672.6	1 326.5	624.2
37132	Complete vehicles produced on purchased chassis -----	1 158.5	886.7	823.8	784.1	505.1	523.8	316.7	193.9
37130	Truck and bus bodies, n.s.k. -----	588.5	184.6	160.2	153.1	147.0	108.0	237.7	116.3
3714-	Motor vehicle parts and accessories -----	60 753.8	57 272.0	58 383.7	55 804.7	46 775.7	38 414.2	37 841.8	19 417.0
37142	Gasoline engines and gasoline engine parts for motor vehicles, new -----	14 550.5	13 778.4	13 261.8	12 219.4	11 008.6	8 274.1		
37144	Filters for internal combustion engines and motor vehicles, new -----	1 684.7	1 579.6	1 483.9	1 494.8	961.5	1 028.9		
37145	Exhaust system parts, new -----	2 579.1	2 685.2	2 426.4	2 279.5	2 135.5	1 672.2		
37146	Drive train components, new, except wheels and brakes -----	15 824.2	13 417.0	13 938.4	14 696.9	12 496.2	9 798.9	36 735.4	18 766.8
37147	Motor vehicle wheels, new -----	1 372.8	1 289.9	1 289.2	1 167.4	1 135.9	815.4		
37148	Brake parts and assemblies, new -----	3 877.6	3 309.4	3 490.8	3 486.7	2 162.1	2 211.0		
37149	All other motor vehicle parts and accessories, new, n.s.k. -----	16 861.9	18 671.9	20 023.5	17 944.9	14 792.0	12 709.5		
3714A	Rebuilt parts for motor vehicles, excluding carburetors and engine electrical equipment -----	1 156.5	1 269.7	1 268.0	1 242.2	1 022.4	890.4	592.9	365.6
37140	Motor vehicle parts and accessories, n.s.k. -----	2 846.5	1 271.0	1 201.7	1 272.8	1 061.5	1 013.9	513.5	284.6
3715-	Truck trailers -----	3 138.1	2 613.0	2 960.0	3 253.8	1 950.2	1 667.5	1 807.0	1 079.0
37151	Truck trailers and chassis, with axle rating of 10,000 lb or more -----	2 821.4	2 468.2	2 818.4	3 107.3	1 831.0	1 525.5	1 680.9	964.4
37152	Truck trailers and chassis, with axle rating of less than 10,000 lb -----	132.1	39.3	40.5	52.3	48.5	78.3	41.3	67.5
37150	Truck trailers, n.s.k. -----	184.6	105.5	101.1	94.3	70.7	63.7	84.8	47.1
3716-	Motor homes produced on purchased chassis -----	2 373.5	1 667.6	1 668.0	1 911.4	1 892.8	1 035.7	1 494.6	509.6
37160	Motor homes built on purchased chassis -----	2 373.5	1 667.6	1 668.0	1 911.4	1 892.8	1 035.7	1 494.6	509.6

¹Figures are estimates derived from a representative sample of manufacturing establishments. Standard errors associated with estimates are published in annual survey of manufactures publications for this period.

Table 7. **Materials Consumed by Kind: 1987 and 1982**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES				
	Materials, parts, containers, and supplies -----	(X)	96 135.7	(X)	54 582.8
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes ----- 1,000 s tons..	*18.5	11.4	39.1	21.6
331012	Sheet and strip ----- do..	**549.0	303.6	636.6	322.9
331013	Plates ----- do..	23.7	15.4	12.2	6.2
331015	Structural shapes ----- do..	(S)	5.8	17.8	12.4
331017	Wire and wire products ----- do..			*4.0	2.1
331019	All other carbon steel mill shapes and forms ----- do..	(S)	16.0	8.4	5.3
	Alloy steel, except stainless:				
331021	Bars and bar shapes ----- 1,000 s tons..	(S)	2.5	41.5	26.0
331029	All other alloy mill shapes and forms ----- do..	(D)	(D)	1.1	.7
331031	Stainless steel ----- do..	2.3	6.0	**5.9	10.7
335105	Copper and copper-base alloy ----- mil lb..	(D)	(D)	(D)	(D)
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil ----- mil lb..	*17.2	21.2	46.7	49.6
335011	Other ----- do..	6.3	7.2	(D)	(D)
335792	Insulated copper wire and cable, except magnet wire ----- do..	(D)	(D)	(D)	(D)
	Castings (rough and semifinished):				
332011	Iron (gray and malleable) ----- 1,000 s tons..	(S)	92.3	411.3	385.5
332045	Steel ----- do..	(D)	(D)	(S)	43.7
336002	Nonferrous ----- mil lb..	(S)	.3	(D)	(D)
346200	Forgings, iron and steel ----- 1,000 s tons..	(D)	(D)	(S)	78.4
362115	Fractional horsepower electric motors (less than 1 hp), excluding timing motors ----- thousands..	(D)	(D)	(D)	(D)
	Bearings, mounted and unmounted:				
356218	Ball ----- (X)		14.1	(X)	20.1
356201	Roller ----- (X)		21.8	(X)	(D)
229501	Coated, impregnated, or laminated fabrics ----- mil lin yd..	(D)	(D)	(D)	(D)
301101	Pneumatic and solid tires and inner tubes ----- mil tires..	*113.6	2 560.9	37.0	1 203.9
305201	Rubber and plastics hose and belting ----- (X)		248.9	(X)	(D)
306902	Fabricated rubber products, except tires, tubes, hose, belting, and gaskets ----- (X)		133.5	(X)	71.9
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes ----- mil lb..	(S)	54.9	(D)	(D)
308006	Fabricated plastics products, except gaskets ----- (X)		551.6	(X)	225.0
285101	Paints, varnishes, lacquers, shellacs, japans, enamels, and allied products ----- (X)		1 040.6	(S)	441.4
345001	Bolts, nuts, screws, rivets, washers, and screw machine products ----- (X)		832.4	(X)	397.6

See footnotes at end of table.

Table 7. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES—Con.				
320102	Glass and glass products, including windows and mirrors	(X)	1 467.7	(X)	553.2
329221	Asbestos friction materials	(X)	(D)	(X)	(D)
227001	Carpeting mil sq yd..	417.8	309.8	(D)	(D)
239621	Automotive trimmings, textile (panels, headliners, etc.)	(X)	824.4	(X)	(D)
239901	Seat covers, seat belts, and shoulder harnesses	(X)	738.0	(X)	(D)
253121	Seats (purchased separately) for autos, trucks, and buses ... 1,000 seats...	(S)	1 293.7	**876.8	110.1
289101	Glues and adhesives mil lb..	*685.2	640.7	(D)	(D)
329302	Gaskets, packing, and sealing devices	(X)	103.9	(X)	(D)
342961	Motor vehicle metal hardware (lock units, door and window handles, hinges, license plate brackets, panel knobs, etc.)	(X)	605.5	(X)	(D)
346501	Automotive stampings (including body parts, hubcaps, fenders, etc.)	(X)	9 027.7	(X)	5 065.6
349501	Wire springs (including seat and back springs) 1,000 s tons...	(D)	(D)	(S)	113.0
349301	Steel springs, except wire (including leaf, helical, and torsion bar)	(S)	506.7	(S)	264.9
358501	Refrigeration compressors, compressor units, condensing units, fin coils, and other refrigeration, air-conditioning, and heat-transfer equipment	(X)	2 400.4	(X)	(D)
359201	Pistons, piston rings, carburetors, valves, intake, and exhaust	(X)	(D)	(X)	(D)
364102	Automotive lamps (bulbs and sealed beams)	(X)	161.6	(X)	(D)
364701	Motor vehicle lighting fixtures (including headlight, taillight, and dome fixtures), except automotive lamps	(X)	401.9	(X)	(D)
365101	Automotive radios and loudspeakers	(X)	1 692.3	(X)	(D)
367412	Integrated microcircuits, including semiconductors, networks, microprocessors, and MOS memories	(X)	(D)	(X)	(⁹)
369104	Storage batteries, automotive millions...	*7.3	262.9	(S)	190.4
369401	Engine electrical equipment	(X)	1 288.4	(X)	(D)
351902	Diesel engines and parts specially designed for diesel engines	(X)	2 152.9	(X)	1 484.2
371401	Gasoline engines and parts specially designed for gasoline engines, not produced in same establishment	(X)	12 334.9	(X)	(D)
382441	Motor vehicle meters and gauges, except electrical (including speedometers, fuel level, oil pressure, etc., not produced in same establishment)	(X)	(D)	(X)	(D)
387311	Automotive clocks thousands...	*866.6	12.4	*3 229.6	21.9
970099	All other materials and components, parts, containers, and supplies	(X)	48 361.7	(X)	1 30 194.3
971000	Materials, parts, containers, and supplies, n.s.k. ²	(X)	3 137.3	(X)	1 950.0
	INDUSTRY 3713, TRUCK AND BUS BODIES				
	Materials, parts, containers, and supplies	(X)	2 507.3	(X)	1 227.0
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes 1,000 s tons...	(S)	14.4	**16.5	8.9
331012	Sheet and strip do...	**266.2	165.7	**145.2	77.5
331013	Plates do...	(S)	22.0	**32.7	16.3
331015	Structural shapes do...	**31.9	18.1	(S)	9.9
331019	All other carbon steel mill shapes and forms	(S)	9.5	(S)	8.9
	Alloy steel, except stainless:				
331021	Bars and bar shapes 1,000 s tons...	(S)	2.2	(S)	.9
331029	All other alloy mill shapes and forms do...	*16.5	9.6	8.5	6.5
331031	Stainless steel mill shapes and forms do...	(S)	9.3	(S)	3.5
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil mil lb...	**100.3	99.5	(S)	35.9
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. do...	**49.4	51.8	(S)	25.1
335008	All other aluminum mill shapes and forms (wire, rolled rod, bar, powder, welded tubing, etc.) do...	(S)	1.4	(S)	.6
335792	Insulated copper wire and cable, except magnet wire	(S)	3.8	*1.1	1.8
	Castings (rough and semifinished):				
332001	Iron (gray and malleable) and steel 1,000 s tons...	(S)	.8	*.9	1.5
336002	Nonferrous mil lb...	(S)	4.0	1.8	1.5
301101	Pneumatic and solid tires and inner tubes mil tires...	(S)	12.6	**1	1.7
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes mil lb...	(S)	5.2	(S)	2.1
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	(X)	9.3	(X)	3.6
285101	Paints, varnishes, lacquers, shellacs, japans, and enamels and allied products	(X)	56.9	(X)	17.4
346901	Metal stampings 1,000 s tons...	(S)	175.7	(S)	25.7
371000	Purchased chassis for vehicles (excluding passenger cars) thousands...	(S)	155.5	**8.9	102.1
371412	Axles, brakes, drums, rims, wheels, and other metal motor wheel parts	(X)	32.7	(X)	9.6
242101	Rough and dressed lumber mil bd ft...	(S)	20.0	(S)	4.1
243001	Veneer and plywood do...	(X)	9.7	(X)	5.2
342961	Motor vehicle hardware	(X)	85.9	(X)	17.7
349301	Steel springs	(X)	6.6	(X)	.6
358501	Compressors, compressor units, condensing units, fin coils, and other heat transfer equipment	(X)	18.9	(X)	8.7
345001	Bolts, nuts, screws, rivets, washers, and screw machine products	(X)	22.7	(X)	9.0
320102	Glass and glass products, including windows and mirrors	(X)	39.3	(X)	8.8
970099	All other materials and components, parts, containers, and supplies consumed (see note)	(X)	935.2	(X)	1419.8
971000	Materials, parts, containers, and supplies, n.s.k. ²	(X)	509.0	(X)	392.1

See footnotes at end of table.

Table 7. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES				
	Materials, parts, containers, and supplies	(X)	32 992.3	(X)	17 772.2
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes 1,000 s tons..	*739.1	462.0	*654.0	393.0
331012	Sheet and strip do..	**3 344.1	1 688.9	*3 434.3	1 747.2
331013	Plates do..	*155.0	75.3	(S)	59.4
331015	Structural shapes do..	(S)	146.0	(S)	37.6
331017	Wire and wire products do..	(S)	93.1	**105.4	71.8
331019	All other carbon steel mill shapes and forms..... do..	(S)	261.5	**224.5	150.1
	Alloy steel, except stainless:				
331021	Bars and bar shapes 1,000 s tons..	*477.1	258.4	*279.9	188.1
331029	All other alloy mill shapes and forms..... do..	(S)	173.3	*241.1	159.2
	Stainless steel:				
331033	Sheet and strip 1,000 s tons..	(S)	192.8	**77.9	103.9
331050	All other stainless steel mill shapes and forms..... do..	(S)	57.0	(S)	23.4
	Copper and copper-base alloy:				
335728	Bare wire for electrical conduction only mil lb..	(S)	10.1	1.9	3.0
335102	Rod, bar, and mechanical wire, including extruded and/ or drawn shapes do..	*123.2	113.8	*89.9	72.8
335143	Plate, sheet, and strip, including military cups and discs..... do..	**109.1	127.5	*107.4	113.3
335152	Pipe and tube do..	*13.8	22.6	*7.7	10.1
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil mil lb..	**247.4	137.4	*49.0	42.1
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. do..	*39.0	57.6	(S)	18.9
335008	All other aluminum mill shapes and forms (wire, rolled rod, bar, powder, welded tubing, etc.) do..	(S)	17.0	38.1	27.0
335792	Insulated copper wire and cable, except magnet wire do..	(S)	4.5	20.6	39.8
339915	Metal powders do..	(S)	78.2	*202.0	76.9
	Primary metals:				
331051	Pig iron, excluding silvery iron 1,000 s tons..	(D)	(*)	*9.3	2.1
333401	Aluminum and aluminum-base alloy refinery shapes do..	(S)	115.2	*38.0	45.0
	Scrap, excluding home scrap:				
190023	Iron and steel 1,000 s tons..	151.3	14.4	339.5	23.7
190020	Aluminum and aluminum-base alloy do..	(D)	(*)	(D)	(*)
	Castings (rough and semifinished):				
332011	Iron (gray and malleable) 1,000 s tons..	*3 376.9	3 054.8	5 598.5	2 175.2
332045	Steel do..	(S)	389.1	(S)	124.6
336005	Aluminum and aluminum-base alloy mil lb..	(S)	1 512.8	(S)	691.3
336006	Copper and copper-base alloy do..	**9.6	10.2	(S)	3.5
336009	Zinc and zinc-base alloy do..	**29.2	34.9	*16.5	22.7
336007	Other nonferrous do..	*172.2	105.0	(D)	(*)
	Forgings:				
346200	Iron and steel 1,000 s tons..	(S)	1 391.7	(S)	1 048.7
346310	Aluminum and aluminum-base alloy mil lb..	(S)	26.3	(S)	15.9
362115	Fractional horsepower electric motors (less than 1 hp), excluding timing motors thousands..	15 869.7	59.1	*4 570.5	44.1
	Bearings, including mounted and unmounted:				
356218	Ball (X)		396.1	(X)	184.3
356201	Roller (X)		295.1	(X)	144.3
229501	Coated, impregnated, or laminated fabrics mil lin yd..	(S)	49.5	10.2	19.2
305201	Rubber and plastics hose and belting (X)		133.3	(X)	48.4
306902	Fabricated rubber products, except tires, tubes, hose, belting, and gaskets (X)		296.3	(X)	174.4
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes mil lb..	**376.4	340.9	259.1	215.9
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes (X)		100.0	(X)	26.7
308006	Fabricated plastics products, except gaskets (X)		426.1	(X)	99.3
280020	Ceramic raw materials, including powders, chemicals, and fibers, excluding refractory uses (X)		41.3	(X)	(*)
320601	Ceramic and ceramic composite parts, components, and accessories (X)		(*)	(X)	(*)
285101	Paints, varnishes, lacquers, shellacs, japans, enamels, and allied products 1,000 gal..	(S)	135.2	**9 073.4	74.1
345001	Bolts, nuts, screws, rivets, washers, and screw machine products (X)		660.4	(X)	301.1
320102	Glass and glass products, including windows and mirrors (X)		44.1	(X)	12.5
329221	Asbestos friction materials (X)		148.1	(X)	92.7
289101	Glues and adhesives mil lb..	(S)	31.9	*31.9	14.9
329302	Gaskets, packing, and sealing devices (X)		290.9	(X)	119.3
346501	Automotive stampings (including body parts, hubcaps, fenders, etc.) (X)		1 144.9	(X)	228.1
359201	Pistons, piston rings, carburetors, and intake and exhaust valves (X)		(*)	(X)	(*)
367004	Resistors, capacitors, transformers, electron tubes, semiconductors, and other electronic-type components (X)		378.9	(X)	(*)
369401	Engine electrical equipment (spark plugs, generators, starting motors, distributors, ignition coils, ignition harness and cable sets, switches, etc.) (X)		723.1	(X)	282.3
371401	Parts specifically designed for gasoline engines, not produced in the same establishment, except parts listed elsewhere (X)		368.5	(X)	316.7
970099	All other materials and components, parts, containers, and supplies consumed (see note) (X)		*12 364.2	(X)	*46 417.4
971000	Materials, parts, containers, and supplies, n.s.k. ² (X)		3 933.0	(X)	1 466.2

See footnotes at end of table.

Table 7. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
INDUSTRY 3715, TRUCK TRAILERS					
	Materials, parts, containers, and supplies -----	(X)	2 180.1	(X)	1 092.0
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes ----- 1,000 s tons..	(S)	22.9	**33.1	12.8
331012	Sheet and strip ----- do..	*124.0	57.8	**58.7	26.5
331013	Plates ----- do..	*61.7	29.0	**41.8	18.4
331015	Structural shapes ----- do..	**107.9	57.5	(S)	17.9
331019	All other carbon steel mill shapes and forms ----- do..	(S)	33.5	(S)	14.7
	Alloy steel, except stainless:				
331021	Bars and bar shapes ----- 1,000 s tons..	(D)	(⁴)	(S)	6.5
331029	All other alloy mill shapes and forms ----- do..	**7.3	5.4	(S)	11.4
331031	Stainless steel ----- do..	**13.1	31.7	*7.7	10.9
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil ----- mil lb..	**160.4	166.7	**63.8	67.8
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. ----- do..	**158.1	163.6	**64.5	65.2
335008	All other aluminum mill shapes and forms (wire, rolled rod, bar, powder, welded tubing, etc.) ----- do..	(S)	4.6	(S)	.9
335792	Insulated copper wire and cable, except magnet wire ----- do..	(S)	3.7	(S)	.2
	Castings (rough and semifinished):				
332001	Iron (gray and malleable) and steel ----- 1,000 s tons..	(S)	4.2	(S)	3.2
336002	Nonferrous ----- mil lb..	(S)	1.5	(D)	(⁴)
301101	Pneumatic tires and inner tubes ----- mil tires..	**1.2	198.5	**1.5	81.6
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, excluding sheets, rods, tubes, and shapes ----- mil lb..	*7.6	6.2	(S)	6.6
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes ----- (X)		13.0	(X)	16.3
285101	Paints, varnishes, lacquers, shellacs, japans, enamels, and allied products ----- (X)		22.6	(X)	7.7
346901	Metal stampings ----- 1,000 s tons..	(D)	(⁴)	**1.1	1.7
371000	Purchased chassis for vehicles (excluding passenger cars) ----- thousands..	(S)	9.5	(S)	2.5
371412	Axles, brakes, drums, rims, wheels, and other metal motor wheel parts ----- (X)		280.8	(X)	127.9
242101	Rough and dressed lumber ----- mil bd ft..	(S)	66.3	(S)	15.0
243001	Veneer and plywood ----- (X)		21.8	(X)	11.4
342961	Motor vehicle hardware ----- (X)		47.8	(X)	4.8
349301	Steel springs ----- (X)		15.6	(X)	5.3
358501	Compressors, compressors units, condensing units, fin coils, and other heat transfer equipment ----- (X)		(⁴)	(X)	.2
345001	Bolts, nuts, screws, rivets, washers, and screw machine products ----- (X)		43.4	(X)	8.5
320102	Glass and glass products, including windows and mirrors ----- (X)		(Z)	(X)	.2
970099	All other materials and components, parts, containers, and supplies consumed (see note) ----- (X)		*412.3	(X)	*206.9
971000	Materials, parts, containers, and supplies, n.s.k. ² ----- (X)		460.2	(X)	339.0
INDUSTRY 3716, MOTOR HOMES					
	Materials, parts, containers, and supplies -----	(X)	1 750.7	(X)	645.6
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes ----- 1,000 s tons..	(D)		(D)	(⁴)
331012	Sheet and strip ----- do..	(S)	12.8	(S)	5.3
331015	Structural shapes ----- do..	(S)		(S)	.6
331019	All other ----- do..	(S)		(S)	.4
331020	Alloy steel, except stainless ----- do..	(D)	(⁴)	(S)	(Z)
331031	Stainless steel ----- do..	(D)		(S)	-
335105	Copper and copper-base alloy ----- mil lb..	(D)	(⁴)	(D)	(⁴)
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil ----- mil lb..	(D)	(⁴)	(S)	2.5
335011	All other ----- do..	(D)	(⁴)	(D)	(⁴)
335792	Insulated copper wire and cable, except magnet wire (quantity of copper content) ----- do..	(S)	18.4	(D)	(⁴)
	Castings, (rough and semifinished):				
332045	Steel ----- 1,000 s tons..	(D)	(⁴)	(D)	(⁴)
336005	Aluminum and aluminum-base alloy ----- mil lb..	(S)	1.8	-	-
243056	Plywood ----- (X)		44.9	(X)	(³)
242103	Dressed lumber ----- mil bd ft..	(S)	23.4	(NA)	(³)
243011	Millwork (including wood doors, window sash, moldings, and cabinets) ----- (X)		32.4	(X)	(³)
344401	Fabricated sheet metal products (except stampings) ----- (X)		24.7	(X)	(³)
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc. ----- mil lb..	(D)	(⁴)	-	-
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes ----- (X)		12.4	(X)	1.3
308006	Fabricated plastics products, except gaskets ----- (X)		24.0	(X)	5.3
320102	Glass and glass products, including windows and mirrors ----- (X)		45.3	(X)	12.0
345001	Bolts, nuts, screws, rivets, washers, and screw machine products ----- (X)		15.6	(X)	3.4
344201	Metal doors and door units, windows, and window units ----- (X)		15.1	(X)	(³)
343201	Metal plumbing fixtures, fittings, and trim (including enameled) ----- (X)		12.7	(X)	(³)
371411	Trailer axles, wheels, brakes, under carriages, and other vehicular parts ----- (X)		31.3	-	-
227001	Carpeting ----- (X)		16.9	(X)	(³)
239101	Curtains and draperies ----- (X)		16.7	(X)	(³)
285101	Paints, varnishes, lacquers, shellacs, japans, enamels, and allied products ----- 1,000 gal..	(S)	12.0	(S)	3.0
229501	Coated, impregnated, or laminated fabrics ----- mil lin yd..	(S)	9.5	**1.2	6.4
343301	Heating equipment (except electric) ----- (X)		16.4	(X)	(³)

See footnotes at end of table.

Table 7. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3716, MOTOR HOMES—Con.				
363001	Household appliances (including refrigerators, cooking equipment, and other household appliances, except air- conditioners) -----	(X)	52.4	(X)	⁽³⁾
358503	Air-conditioning equipment -----	(X)	42.4	(X)	⁽³⁾
364300	Current-carrying wiring devices -----	(X)	51.7	(X)	⁽³⁾
371121	Purchased chassis for motor homes ----- thousands--	47.4	509.8	* 18.2	156.3
301101	Pneumatic tires and inner tubes ----- millions--	(S)	9.0	* 2	2.3
970099	All other materials and components, parts, containers, and supplies consumed (see note) -----	(X)	⁴ 412.0	(X)	³ 4210.5
971000	Materials, parts, containers, and supplies, n.s.k. ² -----	(X)	287.1	(X)	241.3

¹For some establishments, data have been estimated from central unit values which are based on quantity-cost relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

²Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.

³For 1982, data were not collected separately but were included with material code 970099.

⁴Data are included with material code 970099 to avoid disclosing data for individual companies.

⁵For 1982, data for material codes 331011 and 331012 have been combined to avoid disclosing data for individual companies.

APPENDIX A.

Explanation of Terms

This appendix is in two sections. Section 1 includes items requested of all establishments mailed census of manufactures forms including annual survey of manufactures (ASM) forms. Note that this section also includes several items (number of establishments and companies, value added, classes of products, and specialization and coverage ratios) not included on the report forms but derived from information collected on the forms. Section 2 covers supplementary items requested only from establishments included in the ASM sample. Results of the supplementary ASM inquiries are included in table 3c of this report.

SECTION 1. ITEMS COLLECTED OR DERIVED BASED ON ALL CENSUS OF MANUFACTURES (INCLUDING ASM) REPORT FORMS

Number of establishments and companies—As discussed in the Introduction, a separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same line of goods, a separate report was requested for each location. If the company operated in two or more distinct lines of manufacturing at the same location, a separate report was requested for each activity.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

In this report, data are shown for establishments in operation at any time during the year. A comparison with the number of establishments in operation at the end of the year will be provided in the Introduction of the General Summary subject report.

Employment and related items—The report forms requested separate information on production workers for a specific payroll period within each quarter of the year and on other employees as of the payroll period which included the 12th of March.

All employees—This item includes all full-time and part-time employees on the payrolls of operating manufacturing establishments during any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods.

Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average for the payroll periods including the 12th of March, May, August, and November.

Production workers—This item includes workers (up through the line-supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial and guard services, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Employees above the working-supervisor level are excluded from this item.

All other employees—This item covers nonproduction employees of the manufacturing establishment including those engaged in factory supervision above the line-supervisor level. It includes sales (including driver salespersons), sales delivery (highway truck drivers and their helpers), advertising, credit, collection, installation and servicing of own products, clerical and routine office function, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional, and technical employees. Also included are employees on the payroll of the manufacturing establishment engaged in the construction of major additions or alterations to the plant and utilized as a separate work force.

In addition to reports sent to operating manufacturing establishments, information on employment during the payroll period which included March 12 and annual payrolls also was requested of auxiliary units (e.g., administrative offices, warehouses, and research and development laboratories) of multiestablishment companies. However, these figures are not included in the totals for individual

industries shown in this report. They are included in the general summary and geographic area reports as a separate category.

Payroll—This item includes the gross earnings of all employees on the payroll of operating manufacturing establishments paid in the calendar year 1987. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payroll of manufacturing establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' Social Security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

The ASM provides estimates of employers' supplemental labor costs, both those required by Federal and State laws and those incurred voluntarily or as part of collective bargaining agreements. (Supplemental labor costs are explained later in this appendix.)

As in the case of employment figures, the payrolls of separate auxiliary units of multiestablishment companies are not included in the totals for individual industries or industry groups.

Production-worker hours—This item covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave.

Cost of materials—This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (1) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year, (2) electric energy purchased, (3) fuels consumed for heat, power, or the generation of electricity, (4) work done by

others on materials or parts furnished by manufacturing establishments (contract work), and (5) products bought and resold in the same condition. (See discussion of duplication of data below.)

Specific materials consumed—In addition to the total cost of materials, which every establishment was required to report, information also was collected for most manufacturing industries on the consumption of major materials used in manufacturing. The inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. Information on the establishments consuming less than a specified amount (usually \$10,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which either administrative records or short forms were used was imputed as "not specified by kind." (See the introduction for the importance of administrative records in the industry.)

Value of shipments—This item covers the received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as receipts for contract work performed for others, installation and repair, sales of scrap, and sales of products bought and resold without further processing. Included are all items made by or for the establishments from materials owned by it, whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of "all other costs" (including company overhead) and profit. (See discussion of duplication of data below.)

Individual products—As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the 1987 census program, information was collected on the output of approximately 11,000 individual product items. The term "product", as used in the census of manufactures, represents the finest level of detail for which output information was requested. Consequently, it is not necessarily synonymous with the term "product" as used in the marketing sense. In some cases, it may be much more detailed and, in other cases, it is more aggregative. For example, "pharmaceutical preparations" was distributed into over 100 terms; whereas, "motor gasoline" was reported as a single item.

Approximately 6,600 of the product items were listed separately on the 1987 census report forms. Data for

about 4,400 products were obtained in the monthly, quarterly, or annual surveys comprising the Current Industrial Reports series of the Census Bureau. Totals for the year 1987 for these items, as derived from the commodity surveys, are shown in the "products shipped" table (table 6a-2).

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1982 information is presented for most products.

Typically, both quantity and value of shipments information were collected. However, if quantity was not significant or could not be reported by manufacturers, only value of shipments was collected.

Shipments include both commercial shipments and transfers of products to other plants of the same company. For industries in which a considerable portion of the total shipments is transferred to other plants of the same company, separate information on interplant transfers also was collected. Moreover, for products that are used to a large degree within the same establishment as materials or components in the fabrication of other products, total production and often consumption of the item within the plant was collected. Typically, the information on production also was collected for products for which there are significant differences between total production and shipments in a given year because of wide fluctuations in finished goods inventories. Other measures of output of products with long production cycles were used as appropriate and feasible.

Classes of products—To summarize the product information, the separate products were aggregated into classes of products that, in turn, were grouped into all primary products of each industry. The code structure used is a seven-digit number for the individual product, a five-digit number for the class of product, and a four-digit number for the total primary products in an industry. (See Introduction, Industry Classification of Establishments, for application of the coding structure to the assignment of SIC codes for establishments.)

In the 1987 census, the 11,000 products were grouped into approximately 1,500 separate classes on the basis of general similarity of manufacturing processes, types of materials used, and the like. However, the grouping of products was affected by the economic significance of the class and, in some cases, dissimilar products were grouped because the products were not sufficiently significant to warrant separate classes.

Duplication in cost of materials and value of shipments—The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the

addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the annual survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the United States level and beginning in 1964, for all geographic levels.

Value added by manufacture—This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments (products manufactured plus receipts for services rendered). The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of merchandise sold without further manufacture, processing, or assembly) plus the net change in finished goods and work-in-process between the beginning- and end-of-year inventories.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1a), value added is adjusted only for the change in work-in-process inventories between the beginning and end of year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

"Value added" avoids the duplication in the figure for value of shipments that results from the use of products of some establishments as materials by others. Value added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

New and used capital expenditures—For establishments in operation and any known plants under construction, manufacturers were asked to report their new expenditures for (1) permanent additions and major alterations to

manufacturing establishments, and (2) machinery and equipment used for replacement and additions to plant capacity if they were of the type for which depreciation accounts were ordinarily maintained.

The totals for new expenditures include expenditures leased from nonmanufacturing concerns through capital leases, new facilities owned by the Federal Government but operated under contract by private companies, and plant and equipment furnished to the manufacturer by communities and nonprofit organizations. Also excluded are expenditures for used plant and equipment (although reported in the census), expenditures for land, and cost of maintenance and repairs charged as current operating expenses.

Manufacturers also were requested to report the value of all used buildings and equipment purchased during the year at the purchase price. For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. Furthermore, if the establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported under used capital expenditures.

Total expenditures for used plant and equipment is a universe figure; it is collected on all census forms. However, the breakdown of this figure between expenditures for used buildings and other structures and expenditures for used machinery and equipment is collected only on the ASM form. The data for total new capital expenditures, new building expenditures, and new machinery expenditures, as well as the data for total used expenditures, are shown in table 3b.

End-of-year inventories—Respondents were asked to report their 1986 and 1987 end-of-year inventories at cost or market. Effective with the 1982 Economic Censuses, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method (FIFO, LIFO, market, to name a few). In 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

SECTION 2. ITEMS COLLECTED ONLY ON ASM REPORT FORMS

The following items were collected only from establishments included in the ASM sample:

1. **Supplemental labor costs**—Supplemental labor costs are divided into legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not

Because of this change in reporting instructions, the 1982 through 1987 data for inventories and value added by manufacture included in the tables of this report are not comparable to the prior-year data shown in table 1a of this report and in historical census of manufactures and annual survey of manufactures publications.

In using inventory data by stage of fabrication for "all industries" and at the two-digit industry level, it should be noted that an item treated as a finished product by an establishment in one industry may be reported as a raw material by another establishment in a different industry. For example, the finished-product inventories of a steel mill would be reported as raw materials by a stamping plant. Such differences are present in the inventory figures by stage of fabrication shown for individual industries, industry groups, and "all manufacturing", which are aggregates of figures reported by establishments in specified industries.

Specialization and coverage ratios—These items are not collected on the report forms but are derived from the data shown in table 5b. An establishment is classified in a particular industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

As noted in the introduction, an establishment's shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). Specialization and coverage ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in tables 1a through 5a and data on product shipments shown in tables 6a through 6c.

Specialization ratio represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments wherever classified.

specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans.

They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees. While the excluded items do benefit employees and all or part of their cost generally is similar to the items covered in the ASM labor costs statistics, accounting records generally do not provide reliable figures on net employee benefits of these types.

2. **Retirements of depreciable assets**—Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during 1987. When a complete operation or establishment changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.
3. **Depreciation charges for fixed assets**—This item includes depreciation and amortization charged during the year against assets. Depreciation charged against fixed assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation.
4. **Rental payments**—Total rental payments is collected on all census forms. However, the breakdown between rental payments for buildings and other structures and rental payments for machinery and equipment is collected only on the ASM forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets, and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

5. **Depreciable assets**—Total value of gross depreciable assets is collected on all census forms.

However, the detail for depreciable assets is collected only on the ASM forms. The data encompass all fixed depreciable assets on the books of establishments at the beginning and end of the year. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, and equipment (production, office, and transportation equipment) for which depreciation reserves are maintained. Excluded are nondepreciable capital assets, including inventories and intangible assets, such as timber and mineral rights.

The definition of fixed depreciable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year, rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress. In addition, respondents were requested to make certain that assets at the beginning of the year plus new and used capital expenditures, less retirements, equalled assets at the end of the year.

6. **New and used capital expenditures**—The data for total new capital expenditures, new building expenditures, new machinery expenditures, and total used capital expenditures are collected on all census forms. However, the breakdown between expenditures for used buildings and other structures and expenditures for used machinery and equipment is collected only on the ASM form. (See further explanation on capital expenditures in section 1.)
7. **Quantity of electric energy consumed for heat and power**—Data on the cost of purchased electric energy were collected on all census forms. However, data on the quantity of purchased electric energy were collected only on the ASM forms. In addition, information was collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.
8. **Breakdown of new capital expenditures for machinery and equipment**—ASM establishments were requested to separate their capital expenditures for new machinery and equipment into (1) automobiles, trucks, etc., for highway use, (2) computers and peripheral data processing equipment, and (3) all other.

The category “automobiles, trucks, etc., for highway use” is intended to measure expenditures for vehicles designed for highway use that were acquired through a purchase or lease-purchase agreement.

Vehicles normally operating off public highways (vehicles specifically designed to transport materials, property, or equipment on mining, construction, logging, and petroleum development projects) are excluded from this item.

9. Foreign content of cost of materials—Establishments included in the ASM sample panel were requested to provide information on foreign-made materials purchased or transferred from foreign sources. This includes materials acquired from a central warehouse or other domestic establishment of the same company but made in an operation outside of the 50 States, District of Columbia, Puerto Rico, or U.S. territories.

10. Cost of purchased services—ASM establishments were requested to provide information on the cost of purchased services for the repair of buildings and other structures, the repair of machinery, and communication services. Included in the cost of purchased services for the repair of buildings and machinery are payments made for all maintenance and repair work on buildings and equipment, such as painting, roof repairs, replacing parts, and overhauling equipment. Such payments made to other establishments of the same company and for repair and maintenance of any leased property also are included. Extensive repairs or reconstruction that were capitalized are considered capital expenditures for used buildings and machinery and are, therefore, excluded from this item. Repair and maintenance costs provided by an owner as part of a rental contract or incurred directly by an establishment in using its own work force also are excluded.

Three basic approaches were utilized to produce these statistics.

1. For items 1 through 6, data were estimated (imputed) for all non-ASM establishments using the available data in the establishment record and industry-based parameters. The statistics were then generated by simply tabulating all census records including the imputed value for non-ASM establishments and the unweighted value for ASM establishments. Separate imputation rates were developed and are shown in the table. For quantity of purchased electricity for heat and power (item 7), a similar procedure was used; however, the imputation parameters were geographically-based instead of industry-based. For quantities of generated less sold electricity, no imputation was performed for non-ASM establishments. The estimates for these items are simply tabulations of unweighted ASM values.

Since the published statistics for these items were developed from the complete census universe and not just the ASM establishments, there are no sampling variances associated with these statistics. However, there is an unknown level of bias for each of the items due to the imputation of the non-ASM establishments. This bias is felt to be small due to the strong correlation between the items being imputed and the collected items that were used to generate the impute values.

2. For items 8 and 9, the estimates were developed using a ratio estimation methodology. For item 8, an estimate of the breakout of new capital expenditures for machinery and equipment into the three categories was made from ASM establishments reporting these categories. The estimated proportions were then applied to the corresponding Census value for new capital expenditures for machinery and equipment to produce the estimates.

The estimates for item 9, foreign content of cost of materials, were developed in a similar manner based on costs of parts, supplies, and components (item 5a) as the control total for the three categories.

For items 8 and 9, an adjustment ratio of the following form was computed.

$$R_j = \frac{NM_c}{TME_{asm}}$$

where:

NM_c = the census value of new capital expenditures for machinery and equipment

TME_{asm} = the weighted ASM value of new capital expenditures for machinery and equipment from reporters of the detailed breakout data

3. For item 10, cost of purchased services, the estimates were made by simply tabulating weighted data for all the ASM records that reported the item. A response coverage ratio (a measure of the extent to which respondents reported for each item) is shown in table 3c for the three types of services. It is derived for each item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight, see appendix B) for those ASM establishments that reported the specific inquiry to the weighted total employment for all ASM establishments classified in the industry.

APPENDIX B.

Annual Survey of Manufactures (ASM) Sampling and Estimating Methodologies

DESCRIPTION OF SURVEY SAMPLE

The Annual Survey of Manufactures (ASM) contains two components. The mail portion of the survey is a probability sample of about 56,000 manufacturing establishments selected from a total of about 220,000 establishments. These 220,000 establishments represent all manufacturing establishments of multiunit companies and all single establishment companies mailed schedules in the 1982 Census of Manufactures. This mail portion is supplemented annually by a Social Security Administration list of new manufacturing establishments opened after 1982 and a list of new multiunit manufacturing establishments identified from the Census Bureau's Company Organization Survey.

The 1984 through 1988 ASM sample differs slightly from the previous sample. For the current panel, all establishments of companies with 1982 shipments in manufacturing in excess of \$500 million were included in the survey panel with certainty. There are approximately 500 such companies collectively accounting for approximately 18,000 establishments. For the remaining portion of the mail survey, the establishment was defined as the sampling unit. For this portion, all establishments with 250 employees or more and establishments with a very large value of shipments also were included in the survey panel with certainty. A total of 12,100 establishments were selected from this portion of the universe with certainty. Therefore, of the 56,000 manufacturing establishments included in the ASM panel, approximately 31,000 are selected with certainty. These certainty establishments collectively account for approximately 80 percent of the total value of shipments in the 1982 census.

Smaller establishments in the remaining portion of the mail survey were sampled with probabilities ranging from 0.999 to 0.005 in accordance with mathematical theory for optimum allocation of a sample. The probabilities of selection assigned to the smaller establishments were proportional to measures of size determined for each establishment. The measures of size depend directly upon each establishment's 1982 product class values and the historic variability of the year-to-year shipments of each product class. Product classes displaying more volatile year-to-year change in shipments at the establishment level were sampled at a heavier rate.

This method of assigning measures of size was used in order to maximize the precision (that is, minimize the variance of estimates of the year-to-year change) in the value of product class shipments. Implicitly, it also gave weight differences in employment, value added, and other

general statistics, since these are highly correlated with value of shipments. Individual sample selection probabilities were obtained by multiplying each establishment's final measure of size by an overall sampling fraction coefficient calculated to yield a total expected sample size.

The sample selection procedure gave each establishment in the sampling frame an independent chance of selection. This method of independent selection permits the rotation of small establishments out of a given sample panel without introducing a bias into the survey estimates.

The nonmail portion of the survey includes all single-establishment companies that were tabulated as administrative records in the 1982 Census of Manufactures. Although this portion contained approximately 130,000 establishments, it accounted for less than 2 percent of the estimate for total value of shipments at the total manufacturing level. This portion was not sampled; rather, the data for every establishment in this group were estimated based on selected information obtained annually from the administrative records of the Internal Revenue Service and the Social Security Administration. This administrative-record information, which includes payroll, total employment, industry classification, and physical location of the establishment, was obtained under conditions which safeguard the confidentiality of both tax and census records. Estimates of data other than payroll and employment for these small establishments were developed from industry averages.

The corresponding estimates for the mail and nonmail establishments were added together, along with the base-year differences, as defined in the Description of Estimating Procedure section, to produce the figures shown in this publication.

DESCRIPTION OF ESTIMATING PROCEDURES

Most of the ASM estimates for the years 1983-1986 were computed using a difference estimation procedure. For each item, a base-year difference was developed. This base-year difference is equal to the difference between the 1982 census published number for an item total and the linear ASM estimate of the total for 1982. The ASM linear estimate was obtained by multiplying each sample establishment's data by its sample weight (the reciprocal of its probability of selection) and summing the weighted values.

These base-year differences were then added to the corresponding current-year linear estimates, which include the sum of the estimates for the mail and nonmail establishments, to produce the estimates for the years 1983-1986. Estimates developed by this procedure usually are far more reliable than comparable linear estimates developed from the current sample data alone.

The 1987 sample estimates for the purchased service items, shown in table 3c, are strictly ASM linear estimates, however, developed only from ASM establishments that reported the specific item.

The remaining estimates in table 3c, showing the breakdown of expenditures for new machinery and equipment and costs of parts (separated into purchases from foreign sources and purchases from domestic sources), were computed as ratio estimates. To do this, linear estimates of the new machinery detail items were developed from the ASM establishments and were ratio adjusted to the corresponding census total for new machinery. In a similar fashion, the ASM linear estimates of the detailed purchased materials items were ratio adjusted to the corresponding census total for cost of parts.

QUALIFICATIONS OF THE DATA

The estimates developed from the sample are apt to differ somewhat from the results of a survey covering all companies in the sampled lists but otherwise conducted under essentially the same conditions as the actual sample survey. The estimates of the magnitude of the sampling errors (the differences between the estimates obtained and the results theoretically obtained from a comparable, complete-coverage survey) are provided by the standard errors of the estimates.

The particular sample selected for the ASM is one of a large number of similar probability samples that, by chance, might have been selected under the same specifications. Each of the possible samples would yield somewhat different sets of results, and the standard errors are measures of the variation of all the possible sample estimates around the theoretical, comparable, complete-coverage values.

Estimates of the standard errors have been computed from the sample data for selected statistics in this report. They are presented in the form of relative standard errors (the standard errors divided by the estimated values to which they refer).

In conjunction with its associated estimate, the relative standard error may be used to define confidence intervals (ranges that would include the comparable, complete-coverage value for specified percentages of all the possible samples).

The complete coverage value would be included in the range:

1. From one standard error below to one standard error above the derived estimate for about two-thirds of all possible samples.
2. From two standard errors below to two standard errors above the derived estimate for about 19 of 20 of all possible samples.
3. From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference that the comparable, complete-survey result would be within the indicated ranges would be correct in approximately the relative frequencies shown. Those proportions, therefore, may be interpreted as defining the confidence that the estimates from a particular sample would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

For example, suppose an estimated total is shown as 50,000 with an associated relative standard error of 2 percent, that is, a standard error of 1,000 (2 percent of 50,000). There is approximately 67 percent confidence that the interval 49,000 to 51,000 includes the complete-coverage total, about 95 percent confidence that the interval 48,000 to 52,000 includes the complete-coverage total and almost certain confidence that the interval 47,000 to 53,000 includes the complete coverage total.

In addition to the sample errors, the estimates are subject to various response and operational errors: errors of collection, reporting, coding, transcription, imputation for nonresponse, etc. These operational errors also would occur if a complete canvass were to be conducted under the same conditions as the survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected in the course of the Bureau's review of the data for reasonableness and consistency. The small operational errors usually remain. To some extent, they are compensating in the aggregated totals shown. When important operational errors were detected too late to correct the estimates, the data were suppressed or were specifically qualified in the tables.

As derived, the estimated standard errors included part of the effect of the operational errors. The total errors, which depend upon the joint effect of the sampling and operational errors, are usually of the order of size indicated by the standard error, or only moderately higher. However, for particular estimates, the total error may considerably exceed the standard errors shown.

The concept of complete coverage under the conditions prevailing for the ASM is not identical to the complete coverage of the census of manufactures, as the censuses have been conducted. Nearly all types of operational errors that affect the ASM also occur in the censuses. The ASM and the censuses, are conducted under quite different conditions, and operational errors can be better controlled in the ASM than in the censuses. As a result, for many of the census figures, the errors are of the same order of size as the total errors of the corresponding annual survey estimates. The differences between the census and ASM operating conditions also disturb, to some degree, the comparability of the ASM and census data.

Any figures shown in the tables in this publication having an associated standard error exceeding 15 percent may be of limited reliability. However, the figure may be combined with higher-level totals, creating a broader aggregate, which then may be of acceptable reliability.

APPENDIX C.

Changes in Census of Manufactures

Product Classes for 1987

[Based on revisions to the Standard Industrial Classification (SIC) Manual, definitions of some product classes were revised for 1987. Listed below are the revisions to the product classes]

1987	1982	1987	1982	1987	1982	1987	1982
30521	30411	30899 3089A	3079K pt	34919	34948	35483	36233
30522	30412	32295	32291 pt	34921	3494B	35484	35496
30523	30413	32296	32292 pt	34922	3494C	35485	35495 pt 35497
30524	30414	32297	32294 pt	34923	3494D	35533	35531 pt
30525	30415	32298	32291 pt 32292 pt 32294 pt	34924	3494E	35534	35532 pt
30526	30416	32311	32317	34925	3494F	35543	35541 35542 pt
30534	32934	32312	32317	34926	3494G	35544	35542 pt
30535	32935	32927	32928 32929	34927	3494H	35558	35557 pt
30536	32936	33152	33152 34967	3523C	35234 pt 35237 35238 pt	35561	35511
30537	32937	33391	33331	3523E	35234 pt 35238 pt	35562	35512
30538	32938	33392	33334	3523F	3523A 3523B	35563	35513 pt
30539	32939	33398	33321 33323 33399	35246	35243 35245	35591	35591 35699 pt
30611	3069A pt	33561 33562 33563	33569	3531A	35311	35596	35595 pt
30612	3069A pt	33630	33611	3531B	35312	35597	35494
30613	3069A pt	33640	33620 pt 33691 pt 33692 pt 33693 pt	3531C	35317	35599	35595 pt 36360 36362
30614	3069B pt	34234	34232 pt 35531 pt 35532 pt	3531E	35314 pt	35616	3561C
30615	3069B pt	34235	34232 pt 35531 pt 35532 pt	3531F	35316	35631	35631 pt
30616	3069B pt	34236	34233	3531G	35318 pt	35651	35513 pt 35514 pt 35691 pt
30617	3069B pt	34441 34443 34447 34448 34449	34446	3531H	35313 pt 35318 pt 35319 pt	35652	35513 pt 35514 pt 35691 pt
3069C	3069C 35557 pt	34911 34912 34913 34914 34915 34916	3494A	3531K	35319 pt 35361 pt 35371 pt	35676	35672
3069E	30310	34917	34949	3531M	35313 pt 35314 pt 35319 pt 35372 pt	35692	35694 35695 35696
30810	30792	34918	34947	35337	35331 35332 pt	35697 35698	35699 pt
30820	3079K pt	34919	34948	35338	35332 pt	35711	35731 36629 pt
30830	3079K pt	34921	3494B	35339	35333	35712	35734 pt 35735 pt
30840	30794	34922	3494C	3533A	35335	35721	35732 pt
30850	30795	34923	3494D	3533B	35336	35722	35734 pt 35735 pt
30861 30862 30863 30864 30865 30866	30797	34924	3494E	35363	35361 pt	35751	35732 pt 36612 pt
30870	3079K pt	34925	3494F	35364	35362 pt	35752	35734 pt 35735 pt
30880	3079J pt 3079K pt	34926	3494G	35373	35362 pt 35371 pt	35771	35732 pt
30891	3079J pt 3079K pt	34927	3494H	35374	35362 pt 35372 pt	35772	35734 pt 35735 pt
30892	3079J pt 3079K pt	34928	34949	3541D	35411 35412	35781	35743
30893	3079J pt 3079K pt	34929	34950	35430	35650	35782	35744
30894	3079J pt 3079K pt	34930	34951	35454	35453	35783	35745
30895	3079J pt	34931	34952	35455	35452	3585C	3585A 36993
30896	2499A pt 3079J pt 3079K pt	34932	34953	35481	36231	3585D	3585B 36994 pt
30897	3079J pt 3079K pt	34933	34954	35482	36232		
30898	3079J pt 3079K pt	34934	34955				

[Based on revisions to the Standard Industrial Classification (SIC) Manual, definitions of some product classes were revised for 1987. Listed below are the revisions to the product classes]

1987	1982	1987	1982	1987	1982	1987	1982
35931	35996 35997	36411	36410	36991—Con. 36995	36629 pt—Con.	38731—Con.	38734—Con. 38736 38737
35932	35998	36412	36994 pt	36997	35497 pt 36629 pt	39113 39114	39112
35933	35999	36520	36521 pt	36998	36994 pt	39153 39154	39151
35941	35617 35618 35631 pt	36613	35732 pt 36612 pt	3714A	37143	39447	36629 pt 39447
35942	3561A 3561B 35631 pt	36614	36612 pt	37999	37994 37998	39493	39494 pt
35961 35962 35963	35760	36631	36621 36629 pt	38121	38111	39495	3079k pt
36123 36126	36125	36632	36622	38122	36625 pt 36629	39496	39494 pt
36251	36138 pt 36794	36691	36624	38210	38112 38113 pt	39523	39521 39522 pt
36252	36221	36692	36626	38260	38320 38326	39524	39522 pt
36253	36222	36693	36628	38271	38324	39651	39630
36254	36138 pt 36223	36714	36711 36712	38272 38273	38325	39654	39641
36330	36331 36333	36715	36799 pt	38295	36625 pt 38293	39656	39642
36395	36361 36394 36399	36720	36797	38296	38113 pt	39998	39620
		36799	36629 pt 36799 pt	38440	36931	39999	39995
		36950	35732 pt 36792	38450	36930 36933	97372	36522
		36991 36992	36629 pt	38731	38734	97819	36521 pt

APPENDIX D.

Changes in Census of Manufactures

Product Codes for 1987

[Based on revisions to the Standard Industrial Classification (SIC) Manual, definitions of some product codes were revised for 1987. Listed below are the revisions to the product codes. The terms published and collected are defined as follows: (1) published refers to the code used in the published reports for 1987 and 1982, and (2) collected refers to the code appearing on the report forms for 1987]

1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published
30118 00	30118 00	30118 19 30118 20	30539 77	32939 77	32939 77	30830 11 30830 13 30830 19	30793 01 30793 03 30793 09	3079K 90	30892 20— Con.	3079D 33— Con.	3079J 61 pt — Con. 3079J 66 pt 3079K 93 pt
3011A 39	3011A 39	3011A 33 3011A 35	30539 79	32939 79	32939 79						
			30539 81	32939 81	32939 81	30840 11	30794 21	30794 21			
3011C 29	3011C 29	3011C 24 3011C 26 3011C 27	30611 00	3069A 00	3069A 11	30840 12	30794 22	30794 22	30892 30	3079D 35	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 93 pt
30521 00	30411 00	30411 00	30612 00	3069A 00	3069A 12 3069A 15	30840 13	30794 23	30794 23			
30522 00	30412 00	30412 00	30613 00	3069A 00	3069A 13 3069A 14 3069A 16	30840 14	30794 24	30794 24			
30523 00	30413 00	30413 00				30840 15	30794 25	30794 25	30892 90	3079D 39	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 93 pt
30524 00	30414 00	30414 00	30614 00	3069B 00	3069B 11	30840 19	30794 26	30794 26			
30525 00	30415 00	30415 00	30615 00	3069B 00	3069B 12 3069B 13 3069B 14 3069B 19	30850 00	30795 00	30795 00			
30526 00	30416 00	30416 00				30861 00	30797 41	30797 41			
30534 11	32934 11	32934 11	30616 00	3069B 00	3069B 21	30862 10 30862 20 30862 90	30797 51 30797 53 30797 59	30797 42	30893 00	3079F 22	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 93 pt
30534 13	32934 13	32934 13	30617 00	3069B 00	3069B 29	30863 10 30863 90	30797 61 30797 69	30797 44			
30534 15	32934 15	32934 15	30697 77	30697 77	30697 11 30697 78	30864 10 30864 20 30864 30 30864 90	30797 71 30797 73 30797 75 30797 79	30797 45	30894 01	30798 01	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt
30534 17	32934 17	32934 17	3069C 12	35558 72	35557 72						
30535 11	32935 11	32935 11	3069C 30	35558 76	35557 76	30865 10 30865 20 30865 30 30865 40 30865 90	30797 81 30797 83 30797 85 30797 86 30797 89	30797 46	30894 02	30798 02	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt
30535 13	32935 13	32935 13	3069D 20	3069D 20	3069D 17 3069D 19						
30535 15	32935 15	32935 15	3069D 42	3069D 42	3069D 55 3069D 58						
30535 17	32935 17	32935 17				30866 10	30797 43	30797 43			
30535 19	32935 19	32935 19	3069E 20	30310 00	30310 00	30866 90	30797 47	30797 47			
30535 21	32935 21	32935 21	30810 10	30792 11	30792 10 pt 30792 20 pt 30792 30 pt 30792 40 pt 30792 50 pt 30792 60 pt 30792 70 pt	30870 12 30870 13	30791 01 30791 02	3079K 99	30894 03	30798 03	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt
30535 23	32935 23	32935 23				30880 00	3079F 20	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt			
30535 29	32935 29	32935 29									
30536 21	32936 21	32936 21	30810 20	30792 12	30792 10 pt 30792 20 pt 30792 30 pt 30792 40 pt 30792 50 pt 30792 60 pt 30792 70 pt				30894 04	30798 04	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt
30536 22	32936 22	32936 22				30891 01	3079C 11	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt			
30536 25	32936 25	32936 25									
30536 26	32936 26	32936 26									
30536 30	32936 30	32936 30	30810 30	30792 13	30792 10 pt 30792 20 pt 30792 30 pt 30792 40 pt 30792 50 pt 30792 60 pt 30792 70 pt				30894 05	30798 05	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt
30536 35	32936 35	32936 35				30891 03	3079C 13	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt			
30537 29	32937 29	32937 29									
30537 39	32937 39	32937 39									
30537 41	32937 41	32937 41	30810 40	30792 14	30792 10 pt 30792 20 pt 30792 30 pt 30792 40 pt 30792 50 pt 30792 60 pt 30792 70 pt				30894 06	30798 06	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt
30537 43	32937 43	32937 43									
30537 49	32937 49	32937 49				30891 09	3079C 19	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt			
30538 10	32938 10	32938 10	30810 50	30792 19	30792 10 pt 30792 20 pt 30792 30 pt 30792 40 pt 30792 50 pt 30792 60 pt 30792 70 pt				30894 07	30798 07	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt
30538 13	32938 13	32938 13				30892 10	3079D 31	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 93 pt			
30538 15	32938 15	32938 15									
30538 17	32938 17	32938 17									
30538 19	32938 19	32938 19	30820 10 30820 20 30820 30 30820 40 30820 50 30820 60 30820 70 30820 80 30820 90	30796 01 30796 02 30796 03 30796 04 30796 05 30796 06 30796 07 30796 08 30796 19	3079K 80				30894 09	30798 09	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt
30539 70	32939 70	32939 70				30892 20	3079D 33	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt			
30539 73	32939 73	32939 73									
30539 75	32939 75	32939 75							30895 01	30799 01	3079J 61 pt

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30895 01— Con.	30799 01— Con.	3079J 61 pt —Con.	30896 22— Con.	3079A 21— Con.	3079J 61 pt —Con.	30898 05— Con.	3079B 25— Con.	3079J 61 pt —Con.	32927 15	32927 15	32929 11 32929 21
		3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt			3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt			3079J 65 pt 3079J 66 pt 3079K 94 pt 3079K 99 pt	32927 31	32927 31	32929 31
									32927 33	32927 33	32929 33
30895 02	30799 02	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt	30896 23	3079A 23	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30898 06	3079B 26	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 94 pt 3079K 99 pt	32927 34	32927 34	32929 34
									32927 36	32927 36	32929 36
									32927 41	32927 41	32929 41
30895 03	30799 03	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt	30896 24	3079A 25	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30898 07	3079B 27	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 94 pt 3079K 99 pt	32927 77	32927 77	32929 77
									32927 78	32927 78	32929 51 32929 73 32929 75
									32927 98	32927 98	32928 13 32929 98
30896 11	3079A 11	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30896 25	3079A 27	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30898 08	3079B 28	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 94 pt 3179K 99	32961 11	32961 11	32963 11 32965 11
									32961 31	32961 31	32963 31 32965 31
									32961 35	32961 35	32963 35 32965 35
30896 12	3079A 12	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30896 26	3079A 28	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30898 09	3079B 29	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 94 pt 3179K 99	32961 38	32961 38	32963 38 32965 38
									32961 51	32961 51	32963 51 32965 51
									32961 61	32961 61	32963 61 32965 61
30896 13	3079A 13	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30896 27	2499A 94 3079A 29	2499A 94 3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30899 00	3079F 31	3079K 88	32961 98	32961 98	32963 98 32965 98
									3089A 11	3079F 41	3079K 93 pt 3079K 94 pt 3079K 95 pt 3079K 99 pt
									32962 31	32962 31	32964 31 32966 31
30896 14	3079A 14	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30897 01	3079F 25	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	3089A 12	3079F 43	3079K 93 pt 3079K 94 pt 3079K 95 pt 3079K 99 pt	32962 34	32962 34	32964 34 32966 34
									32962 36	32962 36	32964 36 32966 36
									32962 45	32962 45	32964 45 32966 45
30896 15	3079A 15	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30897 09	3079F 27	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 95 pt	3089A 14	3079F 47	3079K 93 pt 3079K 94 pt 3079K 95 pt 3079K 99 pt	32962 51	32962 51	32964 51 32966 51
									32962 61	32962 61	32964 61 32966 61
									32962 83	32962 83	32964 83 32966 83
30896 16	3079A 16	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30898 01	3079B 21	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 95 pt	32295 00	32295 00	32291 00 pt	32962 98	32962 98	32964 98 32966 98
									33121 98	33121 98	33121 79 33121 85 33121 98
									3312A 11 3312A 23 3312A 25 3312A 27	3312A 11 3312A 23 3312A 25 3312A 27	3312A 00
30896 17	3079A 17	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30898 02	3079B 22	3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 94 pt 3079K 99 pt	32620 15	32620 15	32620 14 32620 52 pt	3312B 61 3312B 63 3312B 65 3312B 67	3312B 61 3312B 63 3312B 65 3312B 67	3312B 00
									33151 22 33151 23	33151 22 33151 23	33151 21
									33152 01	33152 01	33152 11 pt 33152 13 pt 33152 17 pt 33152 19 pt 34967 11 pt 34967 13 pt 34967 17 pt 34967 19 pt
30896 18	3079A 18	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30898 03	3079B 23	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 94 pt 3079K 99 pt	32620 19	32620 19	32620 18 32620 52 pt	32752 11	32752 11	32752 00
									32917 23	32917 23	32917 22 32917 24
									32917 40	32917 40	32917 26 32917 28 32917 39
30896 19	3079A 19	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30898 04	3079B 24	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 94 pt 3079K 99 pt	32927 14	32927 14	32928 15 32928 17	32927 14	32927 14	32928 15 32928 17
30896 21	3079A 20	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt 3079J 65 pt 3079J 66 pt 3079K 99 pt	30898 05	3079B 25	3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt						
30896 22	3079A 21	3079J 61 pt 3079J 62 pt			3079J 61 pt 3079J 62 pt 3079J 63 pt 3079J 64 pt						

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1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published
33152 03— Con.	33152 03— Con.	33152 11 pt —Con. 34967 19 pt	33157 42— Con.	33157 42— Con.	33157 31 pt —Con. 33157 71 pt	33561 66— Con. 33562 78 33563 91 33569 91	33561 66— Con. 33562 78 33563 91 33569 91	33569 92— Con.	34236 21	34236 21	34233 21
33152 05	33152 05	33152 11 pt 33152 13 pt 33152 17 pt 33152 19 pt 34967 13 pt 34967 17 pt 34967 19 pt	33157 43	33157 43	33157 31 pt 33157 61 pt 33157 71 pt	33630 00	33611 00	33611 00	34236 31	34236 31	34233 31
									34236 41	34236 41	34233 41
			33159 44 33159 45 33159 48	33159 44 33159 45 33159 48	33159 49	33640 11	33620 42	33620 42	34236 81	34236 81	34238 81
						33640 21	33691 51	33691 51	34236 99	34236 99	34233 99
									34292 12 34298 99	34292 12 34298 99	34298 98
33152 07	33152 07	33152 11 pt 33152 13 pt 33152 17 pt 33152 19 pt 34967 11 pt 34967 13 pt 34967 17 pt 34967 19 pt	33159 99	33159 99	33159 77 33159 98	33640 31	33692 31	33692 31	34320 01 34320 03	34320 01 34320 03	34320 04
									34320 05 34320 07	34320 05 34320 07	34320 06
			33211 21	33211 21	33211 22 pt 33211 24 pt 33211 27 pt 33211 30 pt	33640 41	33693 71	33693 71	34320 09 34320 11	34320 09 34320 11	34320 08
						33640 51	33693 91	33693 91			
						33650 11	33612 11	33612 11	34320 14 34320 25 34320 35	34320 14 34320 25 34320 35	34320 98
33152 09	33152 09	33152 11 pt 33152 13 pt 33152 17 pt 33152 19 pt 34967 11 pt 34967 13 pt 34967 17 pt 34967 19 pt	33211 23	33211 23	33211 22 pt 33211 24 pt 33211 27 pt 33211 30 pt	33650 31	33612 31	33612 31	34320 47 34320 48	34320 47 34320 48	34320 79
						33650 51	33612 51	33612 51			
			33211 25	33211 25	33211 33 pt 33211 36 pt 33211 39 pt 33211 42 pt	33650 61	33612 61	33612 61	34320 71 34320 74 34320 75	34320 71 34320 74 34320 75	34320 98
						33650 73	33612 73	33612 73			
						33660 20	33620 20	33620 20	34320 67 34320 69	34320 67 34320 69	34320 65
33152 10	33152 10	33152 11 pt 33152 13 pt 33152 17 pt 33152 19 pt 34967 11 pt 34967 13 pt 34967 17 pt 34967 19 pt	33211 26	33211 26	33211 33 pt 33211 36 pt 33211 39 pt 33211 42 pt	33660 21	33620 21	33620 21	34320 76 34320 78	34320 76 34320 78	34320 77
						33660 22	33620 22	33620 22			
			33217 31	33217 31	33217 32 pt 33217 34 pt 33217 37 pt 33217 40 pt	33660 23	33620 23	33620 23	34320 80 34320 82	34320 80 34320 82	34320 55
						33660 31	33620 31	33620 31			
						33660 41	33620 52	33620 61 pt	34320 84 34320 86	34320 84 34320 86	34320 56
33152 12	33152 12	33152 11 pt 33152 13 pt 33152 17 pt 33152 19 pt 34967 11 pt 34967 13 pt 34967 17 pt 34967 19 pt	33217 33	33217 33	33217 32 pt 33217 34 pt 33217 37 pt 33217 40 pt	33660 51	33620 51	33620 51	34320 87 34320 88	34320 87 34320 88	34320 98 pt
						33660 61	33620 61 pt	33620 61 pt			
			33217 35	33217 35	33217 43 pt 33217 46 pt 33217 49 pt 33217 52 pt	33660 72	33620 72	33620 72	34320 90 34320 91	34320 90 34320 91	34320 40
						33660 91	33691 61	33691 61			
						33690 15	33692 11	33692 11	34320 92 34320 93	34320 92 34320 93	34320 42
33152 14	33152 14	33152 11 pt 33152 13 pt 33152 17 pt 33152 19 pt 34967 11 pt 34967 13 pt 34967 17 pt 34967 19 pt	33252 11	33252 11	33252 12 33252 13	33690 21	33692 33	33692 33	34320 94 34320 95	34320 94 34320 95	34320 43
						33690 25	33692 41	33692 41			
			33392 31	33334 31	33334 31	33690 91 33690 98	33693 94 33693 99	33693 99	34320 96 34320 97	34320 96 34320 97	34320 44
						33692 37	33334 37	33334 35 pt	34320 99	34320 99	34320 98 pt
						33392 39	33334 39	33334 38 pt	34432 44	34432 44	34432 45
33152 22	33152 22	33152 33 pt 34967 23 pt	33392 41	33334 41	33334 41	33991 91 33991 98	33991 91 33991 98	33991 99	34432 46 34432 48	34432 46 34432 48	34432 47
33152 23	33152 23	33152 23 34967 19 pt	33392 43	33334 43	33334 45 pt	34234 11	34234 11	34232 31	34432 52 34432 54 34432 56 34432 98	34432 52 34432 54 34432 56 34432 98	34432 99
33152 25	33152 25	33152 25 34967 21	33392 49	33334 49	33334 48 pt	34234 22	34234 22	34232 83	34433 13	34433 13	34433 12 34433 14 34433 48 pt
33152 30	33152 30	33152 33 pt 34967 23 pt	33392 51	33334 51	33334 35 pt 33334 38 pt 33334 45 pt 33334 48 pt	34234 33	34234 33	34232 85			
33156 15 33156 17	33156 15 33156 17	33156 13	33392 55	33334 55	33334 55	34234 44 34234 98	34234 44 34234 98	34232 99	34433 17	34433 17	34433 16 34433 18 34433 48 pt
33156 22 33156 24	33156 22 33156 24	33156 21	33392 01	33321 00	33321 00	34235 11	34235 11	34232 53			
33157 21	33157 21	33157 31 pt 33157 61 pt 33157 71 pt	33398 05	33323 00	33323 00	34235 12	34235 12	34232 54	34433 22	34433 22	34433 21 34433 23 34433 48 pt
			33398 73	33398 73	33399 85	34235 21	34235 21	34232 56			
33157 22	33157 22	33157 31 pt 33157 61 pt 33157 71 pt	33398 99	33398 99	33398 23 33398 98 33399 81	34235 22	34235 22	34232 58	34433 32	34433 32	34433 31 34433 33 34433 48 pt
			33416 99	33416 99	33416 51 33416 98	34235 31	34235 31 35533 81	34232 99 pt 35531 85 pt 35532 81 pt			
33157 23	33157 23	33157 31 pt 33157 61 pt 33157 71 pt	33542 61	33542 61	33542 51 pt 33542 53 pt	34235 33	34235 33 35533 83	34232 99 pt 35531 85 pt 35532 81 pt	34433 38	34433 38	34433 45
						34235 39	34235 39 35533 84	34232 99 pt 35531 85 pt 35532 81 pt			
33157 41	33157 41	33157 31 pt 33157 61 pt 33157 71 pt	33542 63	33542 63	33542 51 pt 33542 53 pt	34433 13	34433 13	34434 12 pt	34433 39 34433 50	34433 39 34433 50	34433 48 pt
33157 42	33157 42	33157 31 pt 33157 61 pt	33561 66	33561 66	33569 92	34434 15	34434 15	34434 18 pt	34434 13	34434 13	34434 12 pt
						34236 11	34236 11	34233 11	34434 15	34434 15	34434 18 pt

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34434 17	34434 17	34434 12 pt	34463 12	34463 12	34460 46	34913 35	3494A 45	3494A 45	34931 57	34931 57	34931 56 34931 58
34434 19	34434 19	34434 18 pt	34463 20 34463 22	34463 20 34463 22	34460 49	34913 47	3494A 46	3494A 46	34931 99	34931 99	34931 63 34931 98
34435 21 34435 23	34435 21 34435 23	34435 20	34464 10	34464 10	34460 54 pt 34460 56 pt	34913 59	3494A 47	3494A 47	34932 10 34932 20	34932 10 34932 20	34932 00
34435 31 34435 33	34435 31 34435 33	34435 35	34464 13	34464 13	34460 54 pt 34460 56 pt	34913 61	3494A 49	3494A 49	34944 21	34944 21	34944 11
34435 37 34435 39	34435 37 34435 39	34435 38	34464 16	34464 16	34460 54 pt 34460 56 pt	34914 11	3494A 51	3494A 51	34944 31 34944 41 34944 51 34944 99	34944 31 34944 41 34944 51 34944 99	34944 19
34438 03 34438 05	34438 03 34438 05	34438 04	34464 18	34464 18	34460 54 pt 34460 56 pt	34914 13	3494A 52	3494A 52	34945 12 34945 14 34945 16 34945 17 34945 99	34945 12 34945 14 34945 16 34945 17 34945 99	34945 98
34438 14 34438 16	34438 14 34438 16	34438 15	34465 10	34465 10	34460 54 pt	34914 15	3494A 53	3494A 53	34961 22 34961 31	34961 22 34961 31	34961 21
34438 17 34438 19	34438 17 34438 19	34438 18	34465 12	34465 12	34460 56 pt	34914 17	3494A 54	3494A 54	34964 41	34964 41	34964 31 pt 34964 61 pt 34964 71 pt 34964 99 pt
34439 15 34439 17 34439 19	34439 15 34439 17 34439 19	34439 21	34465 30	34465 30	34460 62	34914 21	3494A 55	3494A 55	34964 43	34964 43	34964 31 pt 34964 61 pt 34964 71 pt 34964 99 pt
34439 31 34439 32 34439 33 34439 34	34439 31 34439 32 34439 33 34439 34	34439 30	34482 11	34482 11	34482 17 34482 27	34914 23	3494A 56	3494A 56	34964 51	34964 51	34964 31 pt 34964 61 pt 34964 71 pt 34964 99 pt
34439 51 34439 53	34439 51 34439 53	34439 56	34625 11 34625 13 34625 15 34625 17	34625 11 34625 13 34625 15 34625 17	34625 00	34914 25	3494A 57	3494A 57	34966 23 34966 25	34966 23 34966 25	34966 13
34441 21	34441 21	34446 37	34626 11 34626 13 34626 15 34626 17	34626 11 34626 13 34626 15 34626 17	34626 00	34914 31	3494A 58	3494A 58	34966 27 34966 29	34966 27 34966 29	34966 21
34441 23	34441 23	34446 36	34627 11 34627 13 34627 15 34627 17	34627 11 34627 13 34627 15 34627 17	34627 00	34914 61	3494A 59	3494A 59	34968 45 34968 46 34968 47	34968 45 34968 46 34968 47	34968 49
34441 27	34441 27	34446 34	34628 11 34628 13 34628 15 34628 17	34628 11 34628 13 34628 15 34628 17	34628 00	34915 11	3494A 61	3494A 61	34968 81 34968 83 34968 85	34968 81 34968 83 34968 85	34968 98
34441 29	34441 29	34446 32	34692 20 34692 88 34692 98	34692 20 34692 88 34692 98	34692 99	34915 23	3494A 63	3494A 63	34992 13 34992 19	34992 13 34992 19	34992 12 34992 15 34992 16
34443 11 34443 13	34443 11 34443 13	34446 21	34696 00 34699 98	34696 00 34699 98	34699 99	34915 35	3494A 65	3494A 65	34995 21 34995 21	34995 21 34995 21	34995 13 34995 15
34443 21 34443 23	34443 21 34443 23	34446 25	34790 10 34790 11 34790 21	34790 10 34790 11 34790 21	34790 19	34915 47	3494A 67	3494A 67	34995 31 34995 39	34995 31 34995 39	34995 19
34447 21	34447 21	34446 47	34790 73 34790 75	34790 73 34790 75	34790 71	34916 11	3494A 69	3494A 69	34998 25 34998 99	34998 25 34998 99	34998 98
34447 25	34447 25	34446 46	34911 11	3494A 11	3494A 11	34916 23	3494A 32	3494A 32	35111 01 35111 02	35111 01 35111 02	35111 00
34447 31	34447 31	34446 11	34911 21	3494A 12	3494A 12	34916 31	3494A 33	3494A 33	35112 00	35112 00	35112 00 pt
34447 41	34447 41	34446 51	34911 23	3494A 13	3494A 13	34916 33	3494A 34	3494A 34	35112 21	35112 21	35112 01 pt 35112 15 35112 16
34448 11	34448 11	34446 62 pt	34911 34	3494A 14	3494A 14	34916 35	3494A 35	3494A 35	35112 22	35112 22	35112 01 pt 35112 17
34448 13 34448 19	34448 13 34448 19	34446 64 pt	34911 38	3494A 15	3494A 15	34916 53	3494A 36	3494A 36	35112 23	35112 23	35112 08 35112 18
34449 31	34449 31	34446 15	34911 43	3494A 17	3494A 17	34916 65	3494A 38	3494A 38	35112 24	35112 24	35112 09 35112 19
34449 41	34449 41	34446 62 pt 34446 64 pt	34911 52	3494A 19	3494A 19	34916 77	3494A 71	3494A 71			
34449 53	34449 53	34446 44	34912 01	3494A 21	3494A 21	34917 11	34949 11	34949 11			
34449 55	34449 55	34446 42	34912 11	3494A 22	3494A 22	34917 13	34949 13	34949 13			
34449 62	34449 62	34446 62 pt	34912 21	3494A 23	3494A 23	34917 15	34949 15	34949 15			
34449 65	34449 65	34446 64 pt	34912 23	3494A 24	3494A 24	34917 27	34949 27	34949 21 34949 23 34949 25			
34449 98	34449 98	34446 98	34912 31	3494A 25	3494A 25	34917 31	34949 31	34949 31			
34461 10	34461 10	34460 07	34912 35	3494A 26	3494A 26	34917 39	34949 39	34949 39			
34461 12	34461 12	34460 09	34912 41	3494A 27	3494A 27	34917 98	34949 98	34949 98			
34461 15	34461 15	34460 12	34912 43	3494A 29	3494A 29	34918 00	34947 00	34947 00			
34461 17	34461 17	34460 17	34913 11	3494A 39	3494A 39	34919 00	34948 00	34948 00			
34462 10	34462 10	34460 31	34913 23	3494A 43	3494A 43	34921 00	3494B 00	3494B 00			
34462 12	34462 12	34460 36				34922 00	3494C 00	3494C 00			
34462 22	34462 22	34460 22				34923 00	3494D 00	3494D 00			
34462 26	34462 26	34460 51				34924 00	3494E 00	3494E 00			
34463 10	34463 10	34460 41				34925 00	3494F 00	3494F 00			

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35112 74	35112 74	35112 75 pt	3531E 00	3531E 00	35314 00 pt	35337 22 35337 23	35337 22 35337 23	35331 41	35364 03	35364 03	35362 09 35362 15 pt
35112 76	35112 76	35112 75 pt 35112 77	3531F 00	3531F 00	35316 00	35337 24 35337 25	35337 24 35337 25	35331 46	35364 04	35364 04	35362 11 35362 15 pt
35112 79 35112 83	35112 79 35112 83	35112 00 pt	3531G 00	3531G 00	35318 00 pt	35337 26 35337 27	35337 26 35337 27	35331 43	35364 05	35364 05	35362 13 35362 15 pt
35199 01	35199 01	35199 98 pt	3531H 00	3531H 00	35313 00 pt 35318 00 pt 35319 85	35337 44	35337 44	35331 44	35364 06	35364 06	35362 14 35362 15 pt
35199 33	35199 26	35199 26	3531K 06	3531K 06	35319 06	35337 45	35337 45	35331 45	35364 17	35364 17	35362 55 pt
35199 41 35199 42	35199 41 35199 42	35199 03	3531K 07	3531K 07	35319 07	35337 47	35337 47	35331 47	35364 52	35364 52	35362 52
35199 43 35199 44	35199 43 35199 44	35199 04	3531K 11	3531K 11	35319 11	35337 48	35337 48	35331 48	35364 54	35364 54	35362 55 pt
35199 45 35199 46	35199 45 35199 46	35199 05	3531K 20	3531K 20	35319 20	35337 59	35337 59	35331 59	35373 01 35373 02	35373 01 35373 02	35371 23 pt
35199 47	35199 47	35199 06 pt 35199 07 pt	3531K 22 3531K 24	3531K 22 3531K 24	35319 23	35338 31	35338 31	35332 31	35373 03	35373 03	35371 11 pt
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35199 55 35199 56	35199 55 35199 56	35199 16	3531K 61	35363 36	35361 36	35339 12	35339 12	35333 12	35373 12	35373 12	35371 61
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35199 59 35199 60	35199 59 35199 60	35199 18	3531K 74	3531K 74	35319 72 35319 73	35339 14	35339 14	35333 14	35373 16	35373 16	35371 11 pt
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35199 91	35199 91	35199 22 pt 35199 23 pt 35199 28 pt 35199 29 pt 35199 98 pt	3531K 82	3531K 82	35319 82	35339 53	35339 53	35333 53	35373 18	35373 18	35371 11 pt
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35239 26	35239 26	35239 21 35239 25	3531K 97	3531K 97	35319 97	35339 61	35339 61	35333 61	35373 21	35373 21	35371 55
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35239 53	35239 53	35239 50 35239 51	3531M 03	3531M 03	35314 00 pt	35339 71	35339 71	35333 71	35373 26	35373 26	35371 75
3523C 00	3523C 00	35234 00 pt 35237 00 35238 00 pt	3531M 05	3531M 05	35319 84 pt 35319 86 pt	35339 82	35339 82	35333 82	35373 28	35373 28	35371 81
3523E 00	3523E 00	35234 00 pt 35238 00 pt	3531M 07	3531M 07	35319 84 pt 35319 86 pt	35339 98	35339 98	35333 98	35373 29	35373 29	35371 83
3523F 00	3523F 00	3523A 00 3523B 00	3531M 09	3531M 09	35319 84 pt 35319 86 pt	3533A 10	3533A 10	35335 10	35373 31	35373 31	35371 71
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3531A 00	3531A 00	35311 00	35329 33	35329 33	35329 31 pt 35329 35 pt	3533B 21	3533B 21	35336 21	35373 35	35364 41	35362 41
3531B 00	3531B 00	35312 00	35329 34	35329 34	35329 31 pt 35329 35 pt	3533B 32 3533B 34	3533B 32 3533B 34	35336 31	35373 39	35373 39	35371 48 35371 99 pt
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			35363 15	35363 15	35361 14	35363 16	35363 16	35361 16	35374 17	35364 57	35362 57
			35363 32	35363 32	35361 33 35361 39 pt	35419 21 35419 22 35419 23 35419 24 35419 25 35419 26	35419 21 35419 22 35419 23 35419 24 35419 25 35419 26	35411 00 35412 00	35421 00	35421 00	35421 10 35421 20
			35337 11	35337 11	35331 11	35363 34	35363 34	35361 35 35361 39 pt	35424 01 35424 02	35424 01 35424 02	35424 11
			35337 12	35337 12	35331 12	35363 37 35363 38	35363 37 35363 38	35361 39 pt	35424 03 35424 04 35424 05	35424 03 35424 04 35424 05	35424 75
			35337 14	35337 14	35331 14	35364 01	35364 01	35362 07 35362 15 pt	35430 11	35650 11	35650 11
			35337 15	35337 15	35331 15	35364 02	35364 02	35362 08 35362 15 pt			
			35337 16	35337 16	35331 16						
			35337 17	35337 17	35331 17						
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1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published
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35441 23 35441 25	35441 23 35441 25	35441 29				35485 01	35497 61	35497 61	35543 04	35543 04	35541 25 35542 73 pt
35441 42 35441 44 35441 83 35441 89	35441 42 35441 44 35441 83 35441 89	35441 91				35485 02	35497 65	35497 65			
35442 15	35442 15	35442 21 35442 25 pt	35463 12 35463 14	35463 12 35463 14	35462 19	35485 03	35497 67	35497 67	35543 05	35543 05	35541 28 pt 35542 73 pt
35442 16	35442 16	35442 25 pt				35485 04	35497 73	35497 73	35543 09	35543 09	35541 31 35542 73 pt
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35442 41 35442 42	35442 41 35442 42	35442 33	35481 01	36231 14	36231 14	35485 07	35495 55	35495 55	35543 12	35543 12	35541 49 pt 35542 73 pt
35442 45 35442 47 35442 67	35442 45 35442 47 35442 67	35442 62 pt	35481 02	36231 16	36231 16	35492 13 35492 18	35492 13 35492 18	35492 19	35543 13	35543 13	35541 45 35542 73 pt
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35451 54	35451 54	35451 48 35451 49	35481 04	36231 32	36231 32	35495 92 35495 95	35495 92 35495 95	35495 98	35543 15	35543 15	35541 41 35541 43 35541 49 pt 35542 73 pt
35454 12	35454 12	35453 12	35481 05	36231 33	36231 33	35521 38	35521 38	35521 42 35521 47	35543 21	35543 21	35541 59 pt 35542 73 pt
35454 14	35454 14	35453 14	35481 06	36231 35	36231 35	35521 39	35521 39	35521 46 35521 48	35543 22	35543 22	35541 51 35542 73 pt
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35454 51	35454 51	35453 51	35482 03	36232 11	36232 11	35533 19	35533 19	35533 62	35544 05	35544 05	35542 87
35454 59	35454 59	35453 59	35482 04	36232 23	36232 23	35533 21 35533 23	35533 21 35533 23	35533 73 pt	35551 02	35551 02	35551 01 35551 03 35551 05 35551 08
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35455 11	35455 11	35452 11	35482 06	36232 31	36232 31	35533 31	35533 31	35533 73 pt	35553 08	35553 08	35553 11 35553 12
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35455 21	35455 21	35452 21	35482 12	36232 54	36232 54	35534 01 35534 02 35534 03	35534 01 35534 02 35534 03	35532 21	35558 83	35558 83	35557 83
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35455 71	35455 71	35452 71	35482 15	36232 62	36232 61 36232 65	35543 01	35543 01	35541 11 35542 73 pt	35558 89	35558 89	35557 89
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35455 91 35455 92	35455 91 35455 92	35452 92	35483 05	36233 13	36233 13	35543 03	35543 03		35561 02	35561 02	35561 41 pt 35561 99 pt
35455 93	35455 93	35452 99 pt	35483 06	36233 23	36233 23				35561 05	35561 05	35561 73
35455 94	35455 94	35452 94	35483 07	36233 31	36233 31				35561 06	35561 06	35561 83
35455 95	35455 95	35452 95	35483 08	36233 52	36233 52						
35455 96 35455 97 35455 98	35455 96 35455 97 35455 98	35452 99 pt	35483 09	36233 61	36233 61						
35462 42 35462 44	35462 42 35462 44	35462 43	35483 11	36233 71	36233 71						
35462 47	35462 47	35462 45 35462 49	35483 19	36233 81	36233 81						
			35484 01	35496 01	35496 01						
			35484 02	35496 05	35496 05						
			35484 03	35496 09	35496 09						
			35484 04	35496 15	35496 15						
			35484 05	35496 17	35496 17						

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35561 07	35511 07	35511 91	35593 01	35593 11	35593 11	35599 13	35599 13	35595 41 pt 35595 98 pt	35616 00	35616 00	3561C 00
35561 08	35511 08	35511 99 pt	35593 03	35593 31	35593 31	35599 15	35599 15	35595 41 pt 35595 98 pt	35645 46 35645 47	35645 46 35645 47	35645 49
35561 09	35511 09	35511 41 pt	35593 05	35593 32	35593 32	35599 17	35599 17	35595 41 pt 35595 98 pt	35646 10 35646 20	35646 10 35646 20	35646 00
35561 11	35511 11	35511 99 pt	35593 07	35593 34	35593 34	35599 19	35599 19	35595 41 pt 35595 98 pt	35651 01	35514 15 35691 15	35514 15 35691 15
35561 19	35511 19		35593 09	35593 35	35593 35	35599 22	35599 22	35595 41 pt 35595 98 pt	35651 02	35514 22 35691 22	35514 22 35691 22
35561 21	35511 21		35593 11	35593 52	35593 52	35599 25	35599 25	35595 41 pt 35595 98 pt	35651 03	35514 26 35691 26	35514 26 35691 26
35562 11	35512 11	35512 11	35593 13	35593 13	35593 53 35593 54	35599 27	35599 27	35595 41 pt 35595 98 pt	35651 04	35514 29 35691 29	35514 29 35691 29
35562 21	35512 21	35512 21	35593 15	35593 61	35593 61	35599 29	35599 29	35595 41 pt 35595 98 pt	35651 05	35514 30 35691 30	35514 30 35691 30
35562 31	35512 31	35512 31	35593 17	35593 71	35593 71	35599 31	35599 31	35595 45	35651 06	35514 32 35691 32	35514 32 35691 32
35562 41	35512 41	35512 41	35593 19	35593 72	35593 72	35599 33	35599 33	35595 49	35651 07	35514 33 35691 33	35514 33 35691 33
35562 51	35512 51	35512 51	35593 21	35593 21	35593 79	35599 35	35599 35	35595 43	35651 08	35514 35 35691 35	35514 35 35691 35
35562 65	35512 65	35512 61 35512 92 pt	35593 23	35593 23		35599 37	35599 37	35595 52	35651 09	35514 41 35691 41	35514 41 35691 41
35562 71	35512 71	35512 71	35593 25	35593 25		35599 39	35599 39	35595 82 pt 35595 83 pt 35595 84 pt	35651 11	35514 52 35691 52	35514 52 35691 52
35562 75	35512 75	35512 75	35593 27	35593 27	35593 81	35599 41	35599 41	35595 73	35651 12	35514 53 35691 53	35514 53 35691 53
35562 85	35512 85	35512 92 pt	35593 28	35593 28		35599 43	35599 43	35595 87	35651 13	35514 54 35691 54	35514 54 35691 54
35562 91	35512 91	35512 87 35512 92 pt	35593 29	35593 29		35599 45	35599 45	35595 88 pt 35595 89 pt	35651 14	35514 55 35691 55	35514 55 35691 55
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35563 02	35513 02	35513 39	35594 03	35594 31	35594 31	35599 49	35599 49	35595 86 pt	35651 16	35514 71 35691 71	35514 71 35691 71
35563 03	35513 03	35513 59 pt	35594 05	35594 51	35594 51	35599 51	35599 51	35595 87	35651 17	35514 81 35691 81	35514 81 35691 81
35563 04	35513 04		35594 07	35594 71	35594 71	35599 53	35599 53	35595 88 pt 35595 89 pt	35651 18	35514 82 35691 82	35514 82 35691 82
35563 05	35513 05	35513 23 pt 35513 59 pt	35594 09	35594 09	35594 79	35599 55	35599 55	35595 89 pt 35595 90 pt	35651 19	35514 83 35691 83	35514 83 35691 83
35563 06	35513 06	35513 52 35513 59 pt	35594 13	35594 13		35599 73	35599 73	35595 94	35651 21	35514 84 35691 84	35514 84 35691 84 pt
35563 07	35513 07	35513 59 pt	35594 15	35594 15		35599 75	35599 75	35595 98 pt	35651 22	35514 11 35691 85	35513 67 35691 84 pt
35563 08	35513 08	35513 49	35594 17	35594 17	35594 81	35599 80	35599 80	35595 98 pt	35652 00	35514 91 35691 91	35513 83 pt 35514 91 35691 91
35563 09	35513 09	35513 59 pt	35594 19	35594 19		35599 82	35599 82	35595 62 pt	35674 01	35674 01	35674 11 pt
35563 11	35513 11	35513 13	35594 21	35594 21		35599 83	35599 83	35595 98 pt	35674 02	35674 02	35674 17
35563 12	35513 12	35513 23 pt 35513 59 pt	35596 01	35596 01	35595 95	35599 85	35599 85	35595 98 pt	35674 03	35674 03	35674 19 pt 35674 31 pt
35563 14	35513 14	35513 59 pt	35596 03	35596 03		35599 86	35599 86	35595 98 pt	35674 04	35674 04	35674 11 pt 35674 19 pt 35674 31 pt
35563 15	35513 15	35513 29 35513 59 pt	35596 05	35596 05		35599 87	35599 87	35595 98 pt	35675 01	35675 01	35675 51
35563 21	35513 21	35513 83 pt	35596 07	35596 07		35599 92	35599 92	35595 98 pt	35675 02	35675 02	35675 59
35591 01	35591 01	35591 00 pt	35596 09	35596 09		35599 93	35599 93	35595 98 pt	35675 03	35675 03	35675 91
35591 03	35591 03		35596 11	35596 11		35599 94	35599 94	35595 98 pt	35676 00	35676 00	35672 00 pt
35591 05	35591 05		35596 13	35596 13		35599 95	35599 95	35595 98 pt	35676 01	35676 01	35672 11
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35591 09	35591 09	35591 00 pt	35596 17	35596 17		35599 97	35599 97	35595 98 pt			
35591 11	35591 11	35591 00 pt	35596 19	35596 19		35599 99	35599 99	35595 98 pt			
35591 13	35591 13	35591 00 pt 35699 97 pt	35596 21	35596 21							
35591 15	35591 15	35591 00 pt	35596 23	35596 23							
35592 01	35592 21	35592 21	35596 25	35596 25							
35592 03	35592 33	35592 33	35596 27	35596 27							
35592 05	35592 35	35592 35	35596 29	35596 29							
35592 07	35592 54	35592 54	35596 31	35596 31							
35592 09	35592 09	35592 98 pt	35596 33	35596 33							
35592 11	35592 11		35596 35	35596 35							
35592 15	35592 15	35592 41 35592 42 35592 98 pt	35596 37	35596 37							
			35596 39	35596 39							
35592 19	35592 97	35592 97	35596 41	35596 41							
			35596 43	35596 43							
			35596 45	35596 45							
			35596 47	35596 47							
			35596 49	35596 49							
			35596 51	35596 51							
			35597 01	35494 01	35494 01						
			35597 02	35494 03	35494 03						
			35597 03	35494 05	35494 05						
			35597 04	35494 07	35494 07						
			35597 05	35494 09	35494 09						
			35597 09	35494 11	35494 17 35494 19 pt						
			35597 11	35494 13	35494 19 pt						
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			35599 03	35599 03							
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			35599 07	35599 07							
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35676 04	35676 04	35672 00 pt				35893 01 35893 02	35893 01 35893 02	35893 11	35963 09	35763 09	35760 84
35676 05	35676 05	35672 41 pt	35771 00	35732 30 35732 61	35732 00 pt	35893 08 35893 09	35893 08 35893 09	35893 98	36122 02	36122 02	36122 00
35676 06	35676 06	35672 00 pt	35772 00	35733 30	35734 30 pt 35735 51 pt 35734 30 pt 35735 51 pt				36122 04	36122 04	36122 00
35676 17	35676 17	35672 41 pt				35921 01	35921 01	35921 11	36122 06	36122 06	36122 14
35676 19	35676 19					35921 02	35921 02	35921 13	36122 14	36122 14	36122 19
35681 11	35681 11	35681 15	35781 00	35743 00	35743 00	35921 03	35921 03	35921 71	36122 21	36122 21	36122 23
35681 13	35681 13					35921 05	35921 05	35921 72	36122 23	36122 23	36122 28
35683 36	35683 36	35683 99 pt	35782 00	35744 00	35744 00	35922 01	35922 01	35922 21	36122 28	36122 28	36122 29
35683 93	35683 93		35783 00	35745 00	35745 10 35745 31				36122 29	36122 29	36122 32
35683 95	35683 95		3579A 00	3579A 00	3579A 20 3579A 40 3579A 41 3579A 44 3579A 50 3579A 55	35922 02	35922 02	35922 23	36122 32	36122 32	36122 33
35692 00	35692 00	35694 00 35695 00 35696 00				35922 03	35922 03	35922 51	36122 33	36122 33	36122 37
35693 04	35693 04	35693 01 pt 35693 02 pt 35693 03 pt	35820 35 35820 36	35820 35 35820 36	35820 24	35922 04	35922 04	35922 53	36122 39	36122 39	36122 39
35693 05	35693 05	35693 01 pt 35693 02 pt 35693 03 pt				35922 05	35922 05	35922 55	36122 41	36122 41	36122 42
35693 06	35693 06	35693 01 pt 35693 02 pt 35693 03 pt	35856 00	35856 00	35856 11 35856 30	35922 06	35922 06	35922 57	36122 42	36122 42	36122 43
35693 07	35693 07	35693 01 pt 35693 02 pt 35693 03 pt	35859 05 35859 07	35859 05 35859 07	35859 09	35922 09	35922 09	35922 59	36122 43	36122 43	36122 44
35693 08	35693 08	35693 01 pt 35693 02 pt 35693 03 pt	3585C 00	3585A 10 3585A 20 36993 00	3585A 10 3585A 20 36993 00	35923 01	35923 01	35923 61	36123 01	36123 01	36125 00 pt
35697 00	35697 00	35699 97 pt	3585D 10	3585B 10	3585B 10	35923 02	35923 02	35923 63	36123 02	36123 02	36125 00 pt
35698 01	35698 01	35699 31	3585D 20	3585B 20	3585B 20	35931 00	35991 00	35996 00 35997 00	36126 01	36126 01	36125 00 pt
35698 02	35698 02		3585D 30	3585B 30	3585B 30	35932 00	35998 00	35998 00	36126 02	36126 02	36125 00 pt
35698 03	35698 03	35699 32	3585D 40	3585B 40	3585B 40	35941 10	35619 00	35617 00 35618 00	36126 03	36126 03	36125 00 pt
35698 04	35698 04		3585D 50	3585B 50	3585B 50	35942 10	3561D 00	3561A 00 3561B 00	36126 04	36126 04	36125 00 pt
35698 05	35698 05	35699 33	3585D 60	3585B 60	3585B 60	35942 20	35631 60	35631 40 pt	36126 05	36126 05	36125 00 pt
35698 06	35698 06		3585D 70	3585B 70	3585B 70	35961 01	35761 01	35760 13	36126 09	36126 09	36125 00 pt
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35698 22	35698 22		35892 45	35892 45	35892 93 pt	35962 05	35762 05	35760 37 pt	36291 05	36291 05	36291 35 36291 98 pt
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35698 25	35698 25	35699 73	35892 80	35892 80	35892 93 pt	35962 11	35762 11	35760 52	36293 02	36293 31	36293 31
35698 26	35698 26		35892 85	35892 85	35892 86	35962 13	35762 13	35760 53	36293 03	36293 03	36293 99
35698 27	35698 27	35699 74	35892 87	35892 87	35892 88	35962 15	35762 15	35760 53	36293 04	36293 04	36293 99
35698 28	35698 28		35892 88	35892 88	35892 93 pt	35962 17	35762 17	35760 53	36293 05	36293 05	36293 99
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35712 00	35733 05	35734 20 35735 41	35892 98	35892 98	35892 93 pt	35962 13	35762 13	35760 61	36330 20	36330 20	36333 95
35721 00	35732 10	35732 00 pt	35892 99	35892 99	35892 93 pt	35962 15	35762 15	35760 61	36349 20	36349 20	36349 13 36349 18 36349 88 36349 89
35722 00	35733 10	35734 30 pt 35735 51 pt	35892 100	35892 100	35892 93 pt	35962 17	35762 17	35760 61			

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1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published
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36395 20	36361 84 36395 40	36361 84 36394 00 pt 36399 91 36399 93				37112 03	37112 03	37112 11 pt 37112 13 pt	37131 11	37131 40	37131 40
36411 00	36410 10	36410 20 36410 55 36410 63	36920 07	36920 07	36920 10 pt 36920 70 pt 36920 82 pt 36920 92 pt	37112 04	37112 04	37112 11 pt 37112 13 pt 37112 15 pt	37131 13	37131 13	37131 42 37131 46
			36920 09	36920 09	36920 95	37112 05	37112 05	37112 11 pt 37112 13 pt	37131 15	37131 48	37131 48
36412 00	36994 22	36994 11 36994 21	36941 01	36941 01	36941 11	37112 05	37112 05	37112 11 pt 37112 13 pt	37131 16	37131 50	37131 50
36489 12	36489 12	36489 11 pt 36489 19 pt	36941 02	36941 02	36941 16	37112 06	37112 06	37112 11 pt 37112 13 pt 37112 15 pt 37112 17 pt 37112 21 pt 37112 23 pt 37112 25 pt 37112 26 pt	37131 17	37131 52	37131 52
			36941 03	36941 03	36941 31				37131 21	37131 37	37131 37
36489 16	36489 16	36489 11 pt	36941 04	36941 04	36941 35	37131 43	37131 30	37131 30	37131 49	37131 49	37131 12 pt 37131 25
36489 17	36489 17	36489 19 pt	36942 01	36942 01	36942 14 36942 28 pt	37131 53	37131 33	37131 33			
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36520 01	36520 01	36521 01 pt 36521 02 pt	36942 03	36942 03	36942 27 36942 28 pt	37112 08	37112 08	37112 23 pt 37112 25 pt 37112 26 pt	37131 57	37131 54	37131 54
36520 03	36520 03	36521 01 pt 36521 02 pt	36942 04	36942 04	36942 37 36942 41 36942 42				37131 61	37131 36	37131 36
36520 05	36520 05	36521 03 36521 04	36943 01	36943 01	36943 11 36943 42 pt	37112 09	37112 09	37112 11 pt 37112 13 pt 37112 15 pt 37112 17 pt 37112 21 pt 37112 23 pt 37112 25 pt 37112 26 pt	37131 62	37131 38	37131 38
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36520 11	36520 11	36521 12 36521 15	36943 02	36943 02	36943 42 pt	37112 09	37112 09	37112 21 pt 37112 23 pt 37112 25 pt 37112 26 pt	37131 69	37131 69	37131 60 pt
36520 19	36520 19	36521 11 36521 13 36521 14 36521 16	36943 03	36943 03	36943 41 36943 42 pt				37132 01	37132 79	37132 79
36613 00	35732 50 36612 20	35732 00 pt 36612 00 pt	36943 03	36943 03	36943 41 36943 42 pt	37112 31	37112 31	37112 11 pt 37112 13 pt 37112 15 pt	37132 02	37132 02	37132 71 37132 75
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36614 00	36612 40	36612 00 pt	36949 07	36949 07	36949 09 pt	37112 32	37112 32	37112 15 pt 37112 17 pt 37112 21 pt 37112 23 pt 37112 25 pt 37112 26 pt	37132 25	37132 77	37132 77
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36632 00	36622 00	36622 00	36949 12	36949 12	36949 03 36949 04	37112 33	37112 33	37112 15 pt 37112 17 pt 37112 21 pt 37112 23 pt 37112 25 pt 37112 26 pt	37132 25	37132 77	37132 77
36691 00	36624 00	36624 00	36949 13	36949 13	36949 05 36949 06				37132 26 37132 27 37132 28 37132 29 37132 31	37132 26 37132 27 37132 28 37132 29 37132 31	37132 98 pt
36692 00	36626 00	36626 00	36949 19	36949 19	36949 09 pt	37112 34	37112 34	37112 26 pt	37142 48	37142 48	37142 03 37142 04 37142 05 37142 22 37142 33 37142 37 37142 49
36693 00	36628 00	36628 00	36950 00	35732 20 36792 00	35732 00 pt 36792 00				37112 35	37112 35	37112 11 pt 37112 13 pt 37112 15 pt
36714 00	36714 00	36711 00 36712 00	36991 00	36629 10 36629 45	36629 00 pt	37112 35	37112 35	37112 11 pt 37112 13 pt 37112 15 pt	37146 03	37146 03	37146 01 37146 02
36715 00	36799 10	36799 00 pt	36992 00	36629 20	36629 00 pt				37146 49	37146 49	37146 19 37146 21 37146 39
36720 00	36797 00	36797 00	36997 00	35497 65 36629 47 36629 50	35497 65 36629 00 pt	37112 36	37112 36	37112 15 pt 37112 17 pt 37112 21 pt 37112 23 pt 37112 25 pt 37112 26 pt	37147 07	37147 07	37147 03 37147 09
36799 20	36799 20 36629 42	36629 00 pt 36799 00 pt	36998 01	36994 51	36994 51				37148 03	37148 03	37148 04 37148 05
36799 30	36799 30	36799 00 pt	36998 02	36994 71	36994 71	37112 39	37112 39	37112 11 pt 37112 13 pt 37112 15 pt 37112 17 pt 37112 21 pt 37112 23 pt 37112 25 pt 37112 26 pt	37148 27	37148 27	37148 29 37148 31
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1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published	1987 published	1987 collected	1982 published						
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3714A 03	3714A 03	37143 23				37322 23	37322 23	37322 47	37433 11	37433 71	37433 71	38210 10	38112 00	38112 00			
3714A 04	3714A 04	37143 26	37322 25	37322 25	37322 48	37433 12 37433 13 37433 14 37433 15	37433 12 37433 13 37433 14 37433 15	37433 79	38210 20	38113 20	38113 00 pt						
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3714A 06	3714A 06																
3714A 07	3714A 07	37143 44	37322 29	37322 29	37322 53 37322 55 pt 37322 61	37511 01	37511 11	37511 11				38260 00	38326 00	38326 00			
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3714A 10	3714A 10	37143 47	37323 05	37323 05	37323 11 pt 37323 35	37511 04	37511 42	37511 42	38272 00	38325 30	38325 00						
3714A 11	3714A 11	37143 48				37511 05	37511 44	37511 44	38273 00	38325 40							
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3714A 19	3714A 19																
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37152 02	37152 02																
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37311 06	37311 06	37311 81 pt	37324 09	37324 09	37324 18 pt 37324 20 pt 37324 25 pt	37615 01	37615 11	37615 11	38421 04	38421 04	38421 11 pt						
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37311 09	37311 09	37311 11 pt 37311 81 pt													38421 06	38421 38	38421 38
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37313 29	37313 29	37313 10 37313 12 37313 14 37313 98 pt							37327 03	37327 03	37327 25 pt 37327 28 pt 37327 35 pt 37327 38 pt	37950 01	37950 01	37950 11 37950 15	38421 08	38421 82	38421 82
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37322 05	37322 05	37322 19 pt	37327 09	37327 09	37327 28 pt 37327 38 pt	37996 04	37996 36	37996 36	38421 91	38421 91	38421 99 pt						
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37322 09	37322 09														37322 15	37431 11	37431 72
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37322 13	37322 13	37322 17 37322 19 pt	37431 15	37431 15	37431 79				38423 22	38423 22	38423 23	38423 23	38423 24				
37322 21	37322 21	37322 40 37322 42 37322 44	37431 17	37431 17	37431 79				38423 24	38423 24	38423 24	38431 12 38431 13	38431 12 38431 13	38431 04			
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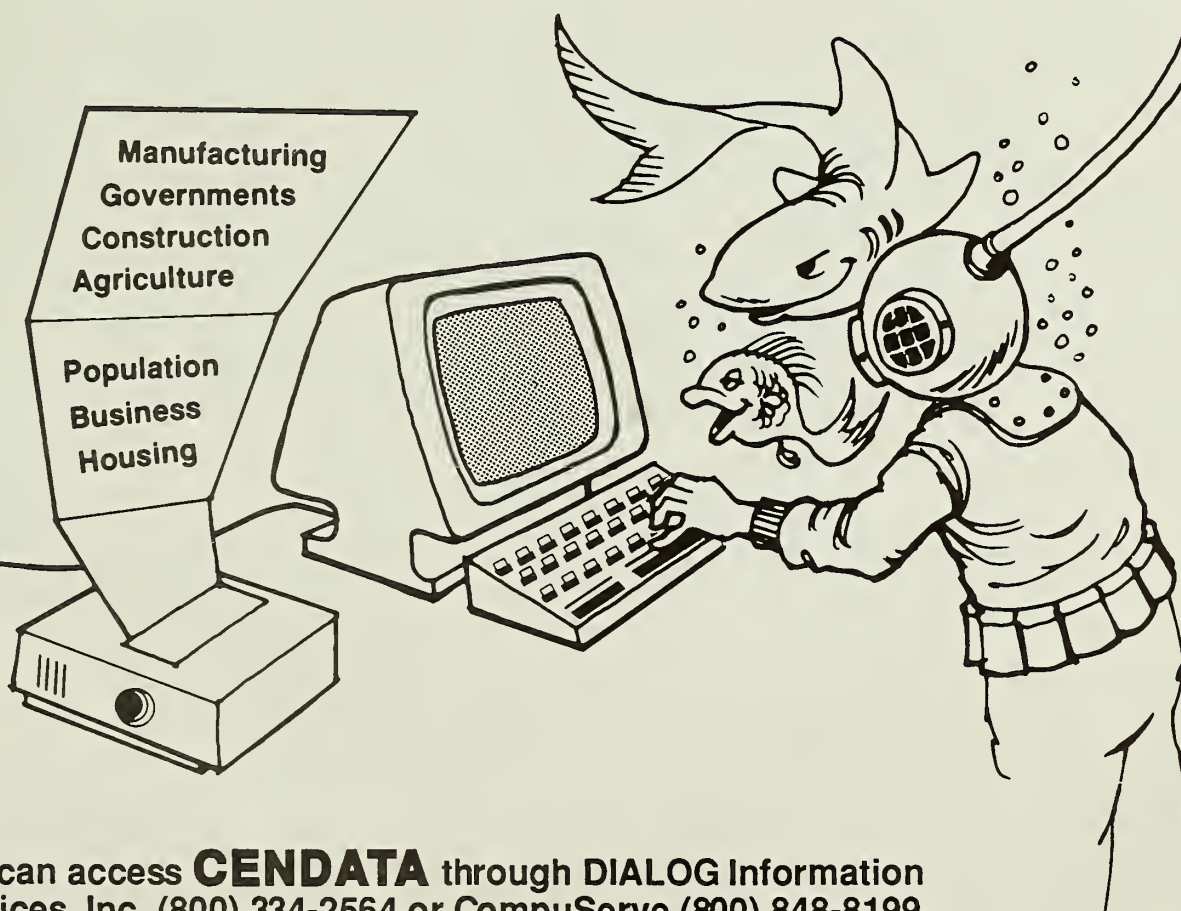
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38611 11	38611 11	38611 12 38611 14	38731 13	38731 13	38736 39	39314 24 39314 25	39314 24 39314 25	39314 23	39651 09	39630 15	39630 15
38611 69	38611 69	38611 67 38611 68	38732 01	38732 01	38732 10 38732 22				39651 11	39630 41	39630 41
38611 91	38611 91	38611 81	38732 02	38732 02	38732 14 38732 24				39651 19	39630 51	39630 51
38611 98	38611 98	38611 43 38611 99	38732 03	38732 03	38732 16 38732 26	39443 46	39443 46	39443 44 39443 45	39651 21	39630 61	39630 61
38613 17	38613 17	38613 27 38613 46				39443 47 39443 98	39443 47 39443 98	39443 99	39651 29	39630 98	39630 98
38613 89	38613 89	38613 98	38732 09	38732 09	38732 18 38732 20 38732 29 38732 30	39447 16	36629 46	36629 00 pt	39651 19	39630 51	39630 51
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						39493 02	39493 02	39494 63	39651 29	39630 98	39630 98
38613 97	38613 97	38613 61	39113 11	39113 11	39112 11 pt	39495 05	39495 05	39495 99 pt	39654 22	39641 22	39641 22
38615 01	38615 01	38615 11 38615 17 38615 32 38615 37	39113 21	39113 21	39112 21 pt	39495 72	39495 72	39495 78 39495 79	39654 23	39641 23	39641 23
			39113 31	39113 31	39112 31 pt	39495 81 39495 88 39495 89	39495 81 39495 88 39495 89	39495 99 pt	39654 31	39641 31	39641 31
38615 02	38615 02	38615 63	39113 41	39113 41	39112 41 pt	39495 92	39495 92	39495 90 pt	39654 33	39641 33	39641 33
38615 03	38615 03	38615 73 38615 74	39114 11	39114 11	39112 11 pt	39495 81 39495 88 39495 89	39495 81 39495 88 39495 89	39495 99 pt	39654 39	39641 39	39641 39
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38615 04	38615 04	38615 75	39114 11	39114 11	39112 11 pt	39495 93	39495 93	39495 91 pt	39656 21	39642 21	39642 21
38615 05	38615 05	38615 57 38615 64 38615 65 38615 76 38615 81	39114 21	39114 21	39112 21 pt	39495 96	39495 96	39495 90 pt 39495 91 pt	39656 32	39642 32	39642 32
38619 00	38619 00	38619 41 38619 43 38619 45	39114 31	39114 31	39112 31 pt	39495 98	39495 98	39495 99 pt	39656 33	39642 33	39642 33
			39114 41	39114 41	39112 41 pt	39496 01	39496 01	39494 65	39656 51	39642 51	39642 51
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38731 01	38731 01	38734 11 38734 12 38736 11	39141 41 39141 43 39141 69	39141 41 39141 43 39141 69	39141 66	39496 03 39496 04	39496 03 39496 04	39494 70	39656 81	39642 81	39642 81
38731 02	38731 02	38734 22 pt 38736 13 pt	39142 35	39142 35	39142 34 39142 36	39496 05	39496 05	39494 69	39656 89	39642 89	39642 89
38731 03	38731 03	38734 21 38734 22 pt 38736 12 38736 13 pt	39142 41 39142 43	39142 41 39142 43	39142 61	39496 06	39496 06	39494 70 pt	39991 51 39991 61 39991 69	39991 51 39991 61 39991 69	39991 67
38731 05	38731 05	38736 31 38736 32 38736 33	39142 55	39142 55	39142 54 39142 56	39523 00	39523 00	39521 00 39522 15	39993 00	39993 00	39993 36 39993 61
			39142 69	39142 69	39142 61 pt	39524 13	39524 13	39522 13	39997 11 39997 51	39997 11 39997 51	39997 00
38731 05	38731 05	38736 31 38736 32 38736 33	39142 55	39142 55	39142 54 39142 56	39524 19	39524 19	39522 19	39998 13	39620 13	39620 13
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PUBLICATION PROGRAM

1987 CENSUS OF MANUFACTURES

Publications of the 1987 Census of Manufactures, containing preliminary and final data on manufacturing establishments in the United States, are described below. Publications order forms for the specific reports may be obtained from any Department of Commerce district office or from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, DC 20233.

Preliminary Reports

Industry series—83 reports (MC87-I-20A(P) to -39D(P))

Preliminary industry data are issued in 83 separate reports covering 459 industries. Preliminary summary data for the U.S. and States are released in one report.

Final Reports

Industry series—83 reports (MC87-1-20A to -39D)

Each of the 83 reports provides information for a group of related industries ("dairy products" includes industries for butter, cheese, milk, etc.). Final figures for the United States are shown for each of the 459 manufacturing industries on quantity and value of products shipped and materials consumed, cost of fuels and electric energy, capital expenditures, assets, rents, inventories, employment, payroll, payroll supplements, hours worked, value added by manufacture, number of establishments, and number of companies. Comparative statistics for earlier years are provided where available.

For each industry, data on value of shipments, value added by manufacture, capital expenditures, employment, and payroll are shown by employment-size class of establishment, State, and degree of primary product specialization.

Geographic area series—51 reports (MC87-A-1 to -51)

A separate report is being published for each State and the District of Columbia. Each report presents data for industry groups and industries on value of shipments, cost of materials, value added by manufacture, employment, payroll, hours worked, new capital expenditures, and number of manufacturing establishments for the State, MSA's, counties, and selected places. Comparative statistics for earlier census years are shown for the State and large MSA's. Manufacturing totals are presented for each county and for places with significant manufacturing activity. Detailed statistics (including inventories, assets, rents, and energy costs) are presented only in statewide totals.

Subject series—7 reports (MC87-S-1 to -7)

Each of the seven reports contains detailed statistics for an individual subject, such as concentration ratios in manufacturing, type of organization, water use in manufacturing, textile machinery in place, distribution of sales by class of customer, manufacturers' shipments to the Federal Government, and a general national-level summary.

Reference series—1 report (MC87-R-1)

The Numerical List of Manufactured and Mineral Products includes a description of the principal products and services published in the 1987 Censuses of Manufactures and Mineral Industries.

Location of Manufacturing Plants—1 report (MC87-LM)

This report includes data for number of establishments by four-digit SIC industry and by employment-size class for counties, incorporated places of 2,500 inhabitants or more, and zip codes for each State. (This report is available only on magnetic tape and CD-ROM.)

Analytical Reports—3 reports (AR87-1 to -3)

Exports From Manufacturing Establishments (AR87-1)

This report presents data on exports by two- and three-digit SIC industry groups for the United States and States. Information is presented on value of direct report shipments and estimates of the employment required to manufacture these products. Included are estimates of employment in manufacturing and nonmanufacturing establishments that supply parts, materials, and services for production of manufactured exports.

Selected Characteristics of Manufacturing Establishments That Export (AR87-2)

This report presents data on the number of manufacturing companies and establishments that export by major group, State, employment size, and ratios of exports to shipments.

Indexes of Production (AR87-3)

The indexes presented in this report are designed to measure the change in physical output of each manufacturing and mineral industry between 1982 and 1987.

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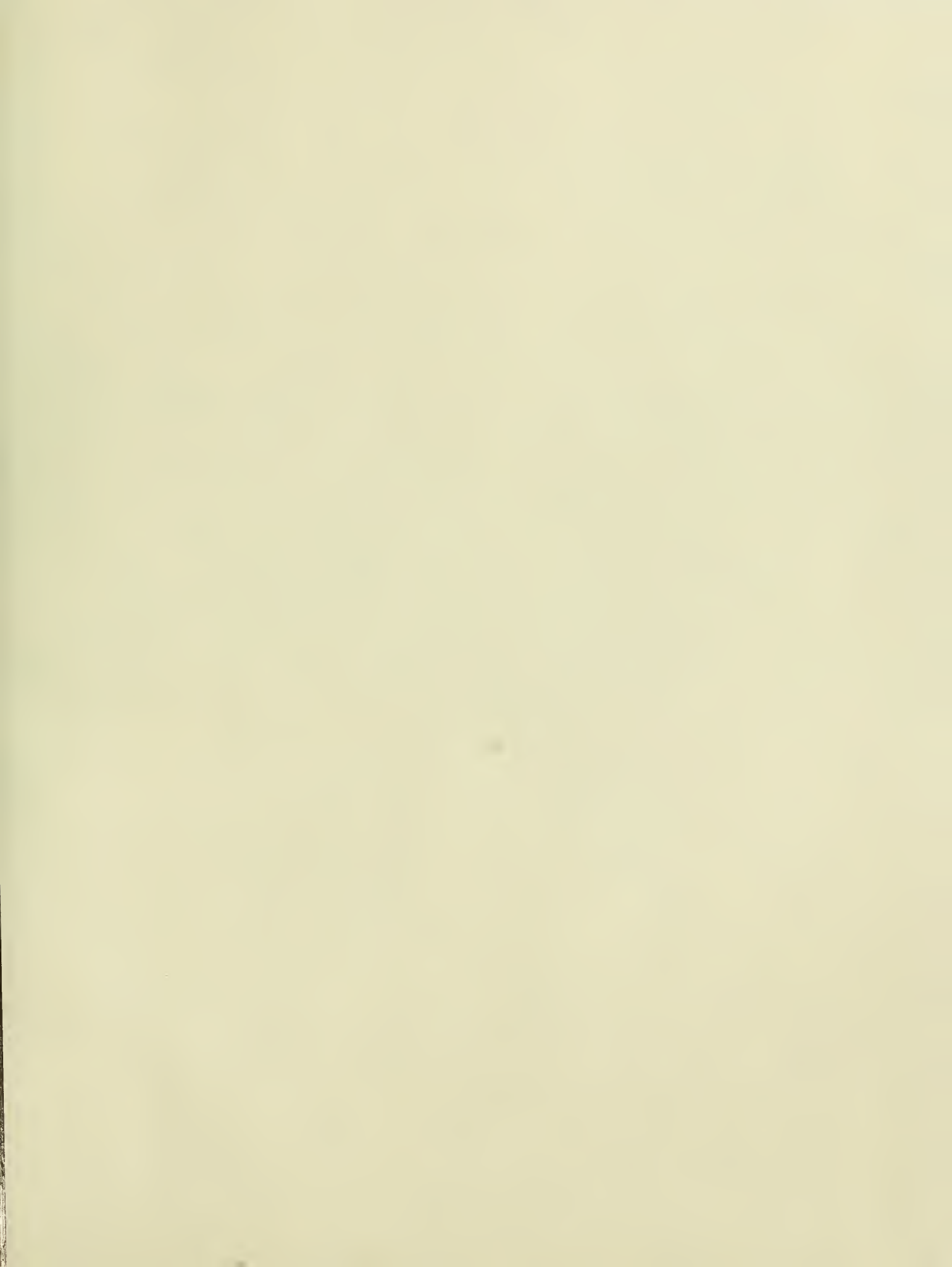
Every final published report in the 1987 Census of Manufactures will be available on microfiche.

PUBLIC-USE COMPUTER TAPES AND COMPACT DISCS

Data from the final industry series, geographic area series, and the Location of Manufacturing Plants report will be available on public-use computer tapes and compact discs—read only memory (CD-ROM). These tapes will provide the same information found in the final reports. Computerized data products are available for users who wish to summarize, rearrange, or process large amounts of data. These products, with corresponding technical documentation, are sold by Data User Services Division, Customer Services (Tapes), Bureau of the Census, Washington, DC 20233.

OTHER ECONOMIC CENSUSES REPORTS

Data on retail trade, wholesale trade, service industries, construction industries, mineral industries, transportation, enterprise statistics, minority-owned businesses, and women-owned businesses also are available from the 1987 Economic Censuses. A separate series of reports covers the censuses of outlying areas—Puerto Rico, Virgin Islands of the United States, Guam, and the Northern Mariana Islands. Separate announcements describing these reports are available free of charge from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, DC 20233.



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